CHAPTER 9
Funding

Implementation of an ITS program for a region requires extensive funding to achieve the needs of most regions. Funding is required to initially implement the system as well as to operate, maintain, and upgrade the system as technology and system needs evolve. In defining potential funding sources, key guidelines for success are to be creative, innovative, and flexible.

The funding process for ITS can be approached in at least two ways. If viewing ITS as an integrated element of many other transportation strategies, ITS funding would be approached as a part of funding an entire package of improvements to address specific problems. For example, ITS funding could be included as part of the funding of a major corridor capacity-expansion project or HOV lane-addition project. In this case, ITS is likely a small part of the total funding package. Altematively, ITS can be treated as a separate set of actions with separate funding. In this case, ITS is often viewed to be in competition for funding against other projects, and obtaining funding tends to become part of an advocacy process. The allocation of funding at the State and metopolitan level often involves a process of advocacy. The extent to which agencies and individuals become advocates of ITS funding is a local decision.

The traditional funding sources, discussed below, are available to assist with the funding of ITS programs. The traditional funding sources include:

- Federal-aid National Highway System funds.
- Surfact Transportation Program (STP) funds.
- Congestion Mitigation and Air Quality (CMAQ) funds.
- State and local sources.
- Operational tests.
- Defense conversion funds.

These funds are available through the traditional methods of allocation, application, and obligation. Procedures in each State may vary regarding how funds may flow down to the metropolitan and local level. Some areas have made major commitments to allocate a significant portion of certain funding pools to ITS. For example, the Houston region's new TRANSTAR system was funded largely through the commitment of CMAQ funds. Other areas have drawn funds from multiple sources over a long period of time, building and operating in increments as the funds became available. Appendix L describes some of the multifaceted funding approaches to ITS that have been taken in southern Califomia.

The successful development and implementation of the metropolitan intelligent transportation infrastructure elements will largely depend upon the availability of funds to cover the costs of such systems. Following are the various funding sources made available through ISTEA. In addition to these funding sources, other funding opportunities exist at the local, State, and Federal level, as well as private-sector contributions. Some of these are:

- At the Local level: Local sales tax, motor vehicle registration fee tax, transit-related funds, toll-road funds, privatization.

- At the State level: State gas tax, State ITS research funds, petroleum violation escrow account, State transit funds.

9.1 ISTEA

The 45,000-mile interstate system, Federal project, has become part of the 155,000-mile National Highway System. The primary, secondary, and urban system designations, previously used, have been dropped. The Federal legislation has shifted responsibility for many transportation decisions to States and local governments. It has consolidated categories into new programs and has increased State and local officials' ability to fund projects that help their communities. It gives States and local governments greater flexibility in how they use Federal funds. This results in getting projects underway faster and has led transportation agencies to tap into new sources of funding. It provides States and local governments with more flexibility and greater freedom to pursue their own vision.

9.1.1 FLEXIBLE FUNDING

The new programs established under ISTEA allow Federal highway and transit funding for flexible use with some restrictions. These programs represent a clear departure from the way Federal financial resources have been administered in the past, with State and local transportation agencies gaining much more control over how and where Federal funds are spent. Because flexible funds have fewer use restrictions, planners are not limited to developing transportation solutions based on what type (highway or transit) of funding is available. They, instead, can orient their transportation plans and programs toward the evaluation of a wide range of alternatives (e.g., demand management, bicycle, pedestrian facilities) that best achieve local goals. Similarly, instead of letting funding requirements drive project investment decisions, officials can determine investment priorities based on their ability to meet not only these local goals for the delivery of transportation services, but broader social and environmental objectives, such as those included among ISTEA's planning factors.

Funding flexibility means that for many multimodal projects, local and State planners have discretion in choosing how funds are to be administered. Several Federal Highway Administration (FHWA) programs may provide for transit-related projects without funds being administered by the Federal Transit Administration (FTA). Certain projects on the National Highway System may receive flexible funds from transit capital operating assistance if certain conditions are met: the use of these funds for highway purposes is approved by the metropolitan planning organization after appropriate notice and opportunity for comment and appeal are provided to affected transit providers; the funds are not needed for capital transit investments required by the Americans with Disabilities Act of 1990; and State and local funds used to match Urbanized Area Formula funds made available for highway purposes are also eligible to fund either highway or transit projects.

ISTEA provides flexibility for Federal funds to be spent on linking different modes of transportation. The transfer of funds from one mode of transportation to another demonstrates an innovative, cooperative approach to meeting investment needs identified by a transportation planning process, regardless of mode. As an example, transferring transit capital to highway capital funds and subsequently

trading these highway funds for transit operating assistance in a certain community demonstrates funding flexibility and interagency cooperation for the benefit of the communities, as well as all modes

transit projects at the discretion of State and local agencies.

All programs under ISTEA are considered flexible funding programs. For example, projects eligible for

activities such as construction and rehabilitation of roads and bridges, public transportation capital improvements, car pooling projects, bicycle and pedestrian facilities, highway and transit research

transit safety improvements, and capital and operating costs for traffic-management and control projects. This provides for wide flexibility in ISTEA funding.

(MPOs), now decide which projects to fund and build. The local role in transportation decision making has increased as MPOs have been given more power.

ultimately sends to States to "reimburse" them for projects costs is controlled through the annual limitation on obligations, part of the Federal budget process. This is an upper limit on the amount of

redistributed obligation authority. FTA programs, however, are appropriated budget authority programs. Funds must be appropriated each year through the Federal budget process. The amounts

annually for various FTA programs. It is this flexibility of fund transfer between the two Federal agencies, then that make it possible for certain public transportation projects and programs to be

The Federal Highway Administration delivers several new programs established by ISTEA that provide State and local transportation planners and decisionmakers with the flexibility to fund transportation

authorized Federal-aid programs for highways and transit for a period of six years at a total funding level of $151 billion. Funding provided for major programs is as follows.

	SIX-YEAR FUNDING (Billions)
National Highway System	
Interstate construction/substitution	$ 8,160
	$17,000
Surface Transportation Program	
Bridge Program	$16,100

Congestion Mitigation/Air Quality Program	
Intelligent transportation systems	$ 0.66
	$ 1.8
Congress demonstration projects	
Other highway	$18,830
	$31,500

National Highway System

In November, 1995, President Clinton signed into law the National Highway System Act of 1995. The purpose of the National Highway System is to provide an interconnected system of principal roadways that serve major population centers, international border crossings, ports, airports, public transportation facilities, and other transportation facilities; meet national defense requirements; and serve interstate and interregional travel. The National Highway System includes the entire interstate system, plus most primary urban and rural highways (including toll facilities) that provide motor vehicle access between such highways and a major port, airport, public transportation facility, and other intermodal transportation facility. It consists of approximately 155,000 miles of major roads. Eligible highway and transit projects under the National Highway System program include:

- Construction and rehabilitation of roads and bridges.
- Fringe and corridor parking facilities.
- Bridge and pedestrian facilities.
- Carpool and vanpool projects.
- Public transportation facilities in a National Highway System corridor.

ISTEA authorized funding for the National Highway System at $21 billion over six years.

a. *Funding*

Each State may unconditionally transfer up to 20 percent of its interstate maintenance apportionment to the Surface Transportation Program or the National Highway System.

Up to half of the money may be shifted to Surface Transportation Program highway and transit.

Fifty percent of a State's National Highway System apportionment may be transferred to the Surface Transportation Program.

If a State certifies that its apportionment is in excess of its maintenance needs, it may, upon approval by the U.S. Secretary of Transportation, transfer this excess to the Surface Transportation Program or the National Highway System. Funds transferred to the Surface Transportation Program may be used

anywhere within the State. One hundred percent of a state's National Highway System apportionment may be transferred to the Surface Transportation Program with the approval of the U.S. Secretary of Transportation.

b. *ITS*

Under the National Highway System, up to two years of start-up funding can be provided for the operations of traffic-management and control systems. Operational improvements include projects to the National Highway System, as well as non-National Highway System highways in a National Highway System corridor. The National Highway System, therefore, provides a major opportunity for ITS funding on principal arterials and corridor systems.

Surface Transportation Program

The Surface Transportation Program provides for the most flexibility of ISTEA's programs and has the bulk of the non-interstate funds. Surface Transportation Program funds may be used for several highway and transit capital and planning activities, including the following.

CAPITAL	PLANNING
Construction/rehabilitation of roads and bridges	Surface transportation activities
Public transportation capital improvements	Development of ISTEA management systems
Car/vanpool projects	Wetland mitigation
Fringe and corridor parking facilities	Highway and transit research and development
Bicycle and pedestrian facilities	Environmental analysis

Other eligible projects under the Surface Transportation Program include highway and transit safety improvements, capital and operating costs for traffic management and control projects, and most transportation control measures.

a. *Funding*

States must use 10 percent of their Surface Transportation program allocations for highway safety construction projects (e.g., hazard elimination, rail-highway crossing improvements, intersection safety improvements, minor highway alignment improvements, guardrail and other protective device installations).

States must use 10 percent of their Surface Transportation Program allocations for transportation enhancement projects (e.g., pedestrian and bicycle facilities, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautifi-

cation, historic preservation, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff).

Whether used for highway or transit projects, 50 percent of each State's Surface Transportation Program allocation must be divided according to relative share of population between each of the areas of greater than 200,000 population and all other areas of the State.

The remaining 30 percent of the Surface Transportation Program allocation can be used in any area of the State.

Up to 40 percent of bridge program funds may be transferred by States to the Surface Transportation system or the National Highway System for purposes consistent with either program.

b. *ITS*

ITS and traffic management projects are not eligible under the 10 percent set-aside for highway safety construction projects and for transportation enhancement projects. While Surface Transportation Program funding for FTA projects requires a local match of at least 20 percent, traffic projects require only 11.5 percent local matching funds. While there is obvious application of Surface Transportation Program funding to capital expenditure for ITS and traffic-management projects, its application to operations and maintenance is not so well defined. There is a provision at the Federal level making such expenditures eligible. However, current local guidelines are that local agencies provide funding for operations and maintenance. Such guidelines need to be modified, given the new ITS technologies to be supported and the increased budget limitations on even routine operations and maintenance.

Congestion Mitigation/Air Quality Program

The Congestion Mitigation and Air Quality improvement (CMAQ) program provides additional funding for air quality nonattainment areas (areas where the air quality is worse than the ozone or carbon monoxide standards) to implement transportation projects that will contribute to an area's compliance with the Clean Air Act. This program is intended to help improve air quality through traffic congestion mitigation projects. Nonattainment areas are found in both urban and rural regions. Projects that reduce travelers' reliance on single-occupancy automobiles can benefit from CMAQ funds. These projects include a wide variety of transit-related projects, such as park-and-ride facilities, high-occupancy vehicle facilities, bus-dedicated lanes, vanpooling and carpooling operations. Additional activities under the CMAQ program include: transit system capital expansion and improvements intended to increase ridership; travel demand management strategies; traffic flow improvement (e.g., incident-management initiatives, ramp metering, signal-timing improvements); pedestrian and bicycle facilities; and automobile inspection and maintenance programs.

CMAQ funds are apportioned to States based on population in nonattainment areas and the severity of its air quality problems states that are in attainment of air quality standards receive 0.5 percent of the national program, which may be used for any project or program under the Surface Transportation Program.

a. *ITS*

Traditionally, ITS and traffic-management programs have been viewed as effective in reducting fuel consumption and pollution, although their effect has not been determined. The Federal share for most eligible activities is 80 percent or 90 percent if used for certain activities on the interstate system. Some activities, including traffic-control signalization and certain transit-related ITS elements may be eligible for 100 percent funding. Because of the broad array of projects eligible under CMAQ, use of these funds for ITS will have to compete with numerous alternative funding requests. It is important, therefore, to establish ITS strategies as an effective use of funds early in the CMAQ program lifecycle. The air quality benefits to be derived from ITS should be demonstrated in the early years of the program.

Intelligent Transportation Systems

The $600 million authorized for ITS in the ISTEA does not replace but is in addition to the $140 million provided for ITS in the 1992 Transportation Appropriations Act. This results in a total ITS program of $800 million. The applicable Federal share is 80 percent. The program was designed to promote the use of advanced technologies in multimodal transportation. While the use of advanced technologies in transportation has been ongoing for many years, the creation of the ITS program has accelerated the pace of innovation and integration of technologies into the transportation system. ITS consists of advanced computers, electronics, and communication technologies used to increase the effectiveness of the entire surface transportation system. The coordination of ITS projects with other transportation programs is vital to optimizing the benefit of those programs and to the success of ITS.

The ITS Corridors Program funds (approximately $500 million) are not to be used to create infrastructure but are targeted at ITS planning, early deployment, and operational tests. The FHWA, which administers these funds and directs them to individual projects, has identified four priority corridors in ozone nonattainment areas to receive funds under the Corridors program. The early deployment program allows for the development and design of initial projects. Under the ITS planning and research program, $27 million of funding is available each year. However, these funds are competitive on a national basis, due to the earmarking of much of this money for specific projects and project types. A certain portion of funding for any given year will be used to support previously funded projects.

Safety

ISTEA provides $1.8 billion for the National Highway Traffic Safety Administration (NHTSA) and Motor Carrier Safety Assistance programs. There is no separate safety construction program. Ten percent of the Surface Transportation Program funds are set aside for safety.

Transit

In addition to the significant increases in funding for transit programs and projects, the Federal share for transit projects rises to 80 percent, the same as highway projects. Formula programs now make up 76 percent of the total transit program. Discretionary funds are divided 40 percent for rail modernization, 40 percent for new fixed guideway systems and extensions, and 20 percent for buses and

related equipment. Operating assistance continues at a 50 percent Federal share. Capital funds can be used for highway purposes in large urban areas if all the requirements of the Americans with Disabilities Act are met, the MPOs approve, and State and local matching dollars are intermodal.

a. *Funding*

Sixty percent of the funding for transit programs comes from the transit account of the Highway Trust Fund. A transit planning and research program has been established and is funded at 3 percent of the total transit program funds. A National Cooperative Transit Research Board and a National Institute have been established and are modeled after their highway counterparts.

9.2 NEXTEA

The National Economic Crossroads Transportation Efficiency Act (NEXTEA) program, which President Clinton has officially unveiled, is a $175 billion program of which ITS would get $1.3 billion (i.e., $196 million annually for the first three years and $230 million annually for the last three years). This represents an 11-percent increase over the 1991 ISTEA, which expires in 1997.

Core infrastructure programs retained: Interstate Maintenance (IM), National Highway System (NHS), Surface Transportation Program, Bridge Program, and Federal Lands Highway Program. NEXTEA mandates higher funding levels for all except the Bridge Program (which takes a small cut, because it is the narrowest program and bridges are eligible under the other major programs).

Eligibility of most core infrastructure programs are expanded, to provide greater flexibility and greater intermodal scope. The biggest eligibility changes are in the Surface Transportation Program (STP), which encompasses railroad as well as highways and transit capital. To increase efficiency of NHS, NHS eligibility is expanded to include passenger terminals and freight-transfer facilities that are on or adjacent to the NHS.

Transferability between IM, NHS, and Bridge Programs is largely retained, but with some conditions to ensure good decision making. STP substate distribution requirements are retained and strengthened, to ensure that metropolitan areas and rural areas are protected. The Federal Lands Highway Program is increased to $525 million/year, and restructured to contain these four elements: 1) Indian

Reservation Roads, 2) Park Roads and Parkways, 3) Forest Highways, and 4) Public Lands Highways

The environmental programs retained include: Congestion Mitigation Air Quality (CMAQ), Transportation Enhancements (TE), Scenic Byways, and Recreational Trails. CMAQ and TE funding is increased by more than 25 percent. The safety programs have been strengthened by NEXTEA. The Surface Transportation Program's (STP) 10 percent safety set-aside is replaced with two new programs: (a.) Flexible Highway Infrastructure Safety Program, at $500 million, which can be used for rail grade crossings and elimination of highway safety hazards, and (b.) Integrated Safety Fund, which The major programs as they relate to ITS of the Administration's March 1997 proposal for NEXTEA is summarrized below:

INTERSTATE MAINTENANCE PROGRAM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	$2,914M	$4,480M	$4,405M	$4,392M	$4,419M	$4,419M	$4,419M

PROGRAM PURPOSE

Although the Interstate System is part of the National Highway System, it retains its separate identity because of the significance of this highway network to the nationwide movement of people and goods, and the resulting impact on the economy. The Interstate Maintenance (IM) Program provides criteria and funding for preserving this important element of the infrastructure.

FUNDING/FORMULA

Continues the apportionment formula in current law -- 55% on Interstate System lane miles, 45% on vehicle miles traveled on the Interstate System. Every State guaranteed a minimum of 1/2% of total IM funds apportioned annually._Continues 90% Federal share.

ELIGIBILITY

Continues to include the reconstruction of bridges, interchanges, and overcrossings along existing Interstate routes, including the acquisition of right-of-way where necessary. Construction of new travel lanes other than High Occupancy Vehicle or auxiliary lanes (such as truck climbing lanes) is not eligible.

Expands to include (1) the reconstruction of Interstate highways and (2) infrastructure-based ITS capital improvements to the extent that they improve the performance of the Interstate.

TRANSFERABILITY

Continues flexibility of States to transfer IM funds (up to 100% of their apportionment) that are in excess of needs for Interstate pavement and bridges to the NHS or STP apportionments.

Provides that all such transfers be conditional upon acceptance by the Secretary of the State's certification of adequate maintenance of its Interstate pavement and bridges in accordance with condition criteria developed by the Secretary. (ISTEA allows unconditional transfers up to 20% of the IM apportionment.) This requirement is separate from the broader annual maintenance certification discussed below.

KEY ISSUES

Strengthens requirement that States maintain highway infrastructure by requiring States to annually certify that they are maintaining all (including Interstate) Federal-aid projects in accordance with the purposes for which each project was constructed. Focusing on the infrastructure as a whole,

NEXTEA eliminates special requirements just for Interstate (i.e., guidelines, annual Interstate maintenance certification, separate Interstate preventive maintenance eligibility standard).

See separate fact sheet on Toll Roads, Bridges, and Tunnels for changes in toll provisions affecting Interstate highways.

NATIONAL HIGHWAY SYSTEM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	$3,600M	$4,466M	$4,391M	$4,378M	$4,405M	$4,405M	$4,405M

PROGRAM PURPOSE

To provide funds for improvement of routes on the National Highway System (NHS). Under current law, funds may be used for certain transit capital improvements and improvements to non-NHS highways. NEXTEA would expand eligibility to other modes (see below).

FUNDING/FORMULA

Establishes a new apportionment formula: 75% based on contributions to the Highway Account of the Highway Trust Fund (HA/HTF) as a percent of total HA/HTF contributions by all States; 15% based on contributions to HA/HTF attributable to commercial vehicles as a percent of total contributions by all States; and 10% based on State's public road mileage as a percent of total public road mileage in all States; each State receives ½% minimum apportionment.

Retains the basic Federal share at 80% with allowable increase to 90 percent for projects on the Interstate System, including HOV or auxiliary lanes, but excluding any other added lanes.

Retains takedown for I-4R Discretionary Program, at a funding level of $45 million/year for 1998-2003 (reduced from the current level of $65M); also retains takedown for Territories (see below).

ELIGIBILITY

Designates the connections to major intermodal terminals submitted by the Secretary on May 24, 1996, as part of the NHS.

Expands the list of eligible activities to include:

1) Publicly owned intercity passenger rail capital projects (including Amtrak) under the same criteria that currently apply to transit and non-NHS highway projects.

2) Natural habitat mitigation.

3) Publicly owned intracity or intercity passenger rail or bus terminals (including Amtrak) and publicly owned intermodal surface freight transfer facilities *(see definition below),* other than airports and

seaports, where the terminals and facilities are located at or adjacent to the NHS or connections to the NHS.

Intermodal surface freight transfer facilities include any access road, parking or staging area, ramp, loading or unloading area, rail yard, track, interest in land, publicly owned rail access line to a seaport, and publicly owned access road to a seaport, if they are used to effect the transfer of freight.

Clarifies eligibility of Intelligent Transportation System (ITS) capital operations and maintenance, and defines operational improvements (already an eligible activity) to expressly include the installation, operation, or maintenance of public infrastructure to support ITS, as well as improvements designated by the Secretary that enhance roadway safety and mobility during adverse weather.

Retains 1% takedown for Territories. Expands eligibility, only in the Territories, to encompass STP-eligible projects and capital improvements to airports and water ports.

TRANSFERABILITY

Continues existing transferability -- up to 50% of NHS funds may be transferred to STP at State discretion; transfers to STP in excess of 50% must be approved by the Secretary.

SURFACE TRANSPORTATION PROGRAM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	$4,097M	$5,874M	$5,785M	$5,723M	$5,728M	$5,684M	$6,192M

PROGRAM PURPOSE

The Surface Transportation Program (STP) provides a flexible source of funds to be used on any surface transportation infrastructure project (except local streets and roads not now eligible), regardless of mode.

FUNDING/FORMULA

Establishes a new apportionment formula: 70% based on contributions to the Highway Account of the Highway Trust Fund (HA/HTF) as a percent of total HA/HTF contributions by all States, and 30% based on the State's population as a percent of total population in all States (latest available annual data).

Eliminates 10% set-aside from STP funds for safety construction, which will become a stand-alone program.

Retains 10% transportation enhancements set-aside; codifies requirement that enhancement projects must have a direct link to surface transportation.

Retains State sub-allocations.

Extends the provision requiring States to make available obligation authority to urbanized areas over 200,000 population, but in two 3-year increments rather than one 6-year period as in ISTEA. Adds the requirement that the State, affected MPO, and Secretary ensure compliance with this provision.

Specifies that the State and affected MPOs ensure fair and equitable treatment of central cities over 200,000 population in the allocation of these attributable funds.

Retains the special rule for areas of less than 5,000 population.

ELIGIBILITY

Expands the list of eligible activities to include:

1) Publicly owned rail safety infrastructure improvements and non-infrastructure highway safety improvements.

2) Natural habitat mitigation.

3) Publicly or privately owned vehicles and facilities that are used to provide intercity passenger service by bus or rail (including Amtrak).

4) Publicly owned intercity passenger and freight rail infrastructure (including Amtrak).

Clarifies the eligibility of Intelligent Transportation System (ITS) capital operations and maintenance, and defines operational improvements (already an eligible activity) to expressly include the installation, operation, or maintenance of public infrastructure to support ITS, as well as improvements designated by the Secretary that enhance roadway safety and mobility during adverse weather.

Clarifies current law to assure that modifications of existing public sidewalks (regardless of whether the sidewalk is on a Federal-aid highway right-of-way), to comply with the requirements of the Americans with Disabilities Act, are eligible under STP.

KEY ISSUE: STREAMLINING

See fact sheet on Program Streamlining for important changes in program delivery and project oversight that affect the STP.

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	$1,029M	$1,300M	$1,300M	$1,300M	$1,300M	$1,300M	$1,300M

PROGRAM PURPOSE

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds transportation programs and improvement projects that will assist air quality nonattainment and maintenance areas to reduce transportation emissions.

FUNDING/FORMULA

Retains basic structure of the apportionment formula, distributing funds on the basis of population and the severity of pollution, but makes certain changes in formula details.

Modifies the current apportionment formula to include maintenance areas, i.e., areas redesignated to attainment, and particulate matter nonattainment areas.

Eliminates:

The freeze on the apportionment factors imposed under the NHS Designation Act.
The provision for California, New York, and Texas which apportions funds to these States based on total population rather than nonattainment area populations.

Retains ½% minimum apportionment to each State.

Retains Federal share of project cost at 80%.

ELIGIBILITY

Expands to include scrappage of pre-1980 vehicles and extreme cold start programs.

Expands the use of funds to designated nonattainment areas under the newly proposed air quality standards, provided the State has submitted to the Environmental Protection Agency a State Implementation Plan including the new nonattainment areas. Currently, funds may be used only in nonattainment and maintenance areas that meet the classifications under the 1990 Clean Air Act Amendments.

Reinstates a three-year limit on the use of funds for operating assistance on traffic management and control projects.

Limits Federal share for signalization and carpooling to standard 80%.

TRANSFERABILITY

Targets funding at maintenance areas if there are no nonattainment areas within a State, but relieves this requirement if the State can demonstrate adequate funding for transportation-related maintenance plan activities.

KEY ISSUES

Levels the playing field by allowing CMAQ proposals to compete for funding equally. Operating assistance is limited to three years for all projects, and all projects are funded at the same 80% Federal share.

Modifies resource allocation by more fairly apportioning funds on the basis of need and expanding the formula to include other transportation-related pollutants such as carbon monoxide and particulate matter.

Addresses continuing needs by providing greater focus and funding to maintenance areas.

Ensures that no State will lose CMAQ funding as a result of the inclusion of any area in the CMAQ apportionment formula designated under the newly proposed air quality standards.

MAJOR CAPITAL INVESTMENTS PROGRAM (5309)

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	$760M	$800M	$950M	$1,000M	$1,000M	$1,000M	$1,027M

PROGRAM PURPOSE

The Major Capital Investments Program would provide transit capital assistance for new fixed guideway systems and extensions to existing fixed guideway systems.

FUNDING/FORMULA

Continues funding from the Mass Transit Account of the Highway Trust Fund.

Continues the discretionary nature of the program in current law, limited to new starts under a newly titled Major Capital Investments Program. Projects must still compete for funding using specific criteria to justify the major investment involved.

Ends discretionary grants for bus and bus related capital projects; resources moved to Urbanized Area Formula Program.

Moves fixed guideway modernization formula program into Urbanized Area Formula Program.

Continues 80% Federal share and the 90% Federal share for the incremental costs of vehicle related equipment needed to comply with Clean Air and Americans with Disabilities Act requirements.

Removes 40%, 40%, 20% allocation formula among rail fixed guideway modernization, new fixed guideway systems and extensions, and bus and bus-related facilities since this section now covers only major capital investments.

KEY MODIFICATIONS

Restricts eligibility to capital projects for new fixed guideway systems and extensions to existing fixed guideway systems.

Streamlines and consolidates program requirements and procedures such as certification of legal, financial, technical capacity, continuing control over the use of equipment and facilities, maintenance of equipment and facilities, government's share of costs, and advance construction.

URBANIZED AREA FORMULA PROGRAM (5307)

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	$3,118M	$3,657M	$3,657M	$3,657M	$3,657M	$3,657M	$3,759M

PROGRAM PURPOSE

The urbanized area formula program provides transit capital and operating assistance to urbanized areas. Under ISTEA, approximately $11.8 billion was provided to transit agencies for bus and rail vehicle replacements and facility recapitalization.

FUNDING/FORMULA

Continues the apportionment formula in the current law - which is based on population and population density for areas under 200,000; and on population, population density, and transit data for areas over 200,000 in population.

Proposes funding completely from the Mass Transit Account of the Highway Trust Fund. Now funded from both the Mass Transit Account and the General Fund.

Continues 80% Federal share and 90% Federal share for the incremental costs of vehicle related equipment needed to comply with Clean Air and Americans with Disabilities Act requirements.

ELIGIBILITY

Expands funding in areas under 200,000 in population to operating and capital without limit. Use for operating expenses now subject to statutory cap.

Expands definition of capital to include preventive maintenance while eliminating operating assistance for areas over 200,000.

Expands eligibility to include planning, the transportation cooperative research program, university transportation centers, training, research, technology transfer.

Streamlines and consolidates program requirements and procedures such as certification of legal, financial, technical capacity, continuing control over the use of equipment and facilities, maintenance of equipment and facilities, government's share of costs, and advance construction.

TRANSFERABILITY

Continues existing flexibility by permitting funds to be used for a highway project only if local funds are eligible to finance either highway or transit projects, i.e., are flexible.

HIGHWAY SAFETY PROGRAM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	$302.7M*	$392.5M	$392.5M	$392.5M	$392.5M	$392.5M	$402.4M

* 1997 includes NHTSA/FHWA authorizations for Section 402 (including rescissions), NHTSA Section 410 and 403, the National Driver Register, and the portion of the NHTSA program not funded by ISTEA ($88M), for comparability with later years; 1998-2003 consolidates NHTSA and FHWA Section 402 authorizations and includes the total NHTSA program.

PROGRAM PURPOSE

The Highway Safety Program provides funding for grants to States for non-infrastructure, safety behavior programs. The new authorization also will provide funding for the entire National Highway Traffic Safety (NHTSA) program, including motor vehicle and cost savings programs. Emphasis will be on performance based management and quantifiable results.

FUNDING/FORMULA

Establishes a consolidated Section 402 State formula grant program and incentive grants in the following 4 program areas:

(1) Alcohol-Impaired Driving Countermeasures: provides increased authorization level for a revised and updated alcohol incentive grant program; States can qualify for basic and supplemental grants by meeting programmatic and legal criteria or new results criteria (based on the percent of fatally injured drivers with a blood alcohol count of 10 or more); funding for each basic grant: up to 15% of the State's FY 1997 apportionment; funding for supplemental: for each criterion met (for no more than 2 years), up to 5% of the State's Section 402 FY 1997 apportionment.

(2) Occupant Protection Program: a new incentive grant program to encourage States to increase level of effort for safety belt and child safety seat use; States can qualify for basic and supplemental grants by meeting programmatic and legal criteria or results criteria (based on safety belt use rates);

funding for each basic grant: up to 20% of the State's FY 1997 apportionment; funding for supplemental: for each criterion met, up to 5% of the State's Section 402 FY 1997 apportionment.

(3) State Highway Safety Data and Traffic Records Improvements: a new incentive grant program to improve data to identify priorities, evaluate effectiveness, and link data; authorized for 1998-2001; first year and succeeding year grants; set dollar amounts, based on available appropriations.

(4) Drugged Driving Countermeasures: a new grant program; authorization beginning in 1999; States must meet 5 out of 9 programmatic and legal criteria; funding for grants: up to 20% of the State's Section 402 FY 1997 apportionment.

Increases the 402 apportionment amount to Native American populations by one-quarter percent and broadens the coverage of Indian tribes by a new definition, "Indian Country," which counts Indians living in areas off reservations. Otherwise, Section 402 State formula remains the same (75% based on population) and 25% based on public roadway mileage).

FLEXIBLE HIGHWAY INFRASTRUCTURE SAFETY PROGRAM AND INTEGRATED SAFETY FUND

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Infrastructure Sfty.	*	$500M	$525M	$550M	$550M	$550M	$575M
Integ. Safety Fund	. . .	$50M	$50M	$50M	$50M	$50M	$50M

* Over the life of ISTEA, an average of $445 million was set aside from STP for safety construction.

Infrastructure Safety Program

PROGRAM PURPOSE

The Infrastructure Safety Program provides funds to eliminate hazards on public roadways other than the Interstate, and to improve the safety of rail/highway grade crossings. It replaces the STP safety set-aside.

FUNDING/ FORMULA

Rail/highway grade crossing -- Funded at $165M/year: 25% on number of crashes at public grade crossings, 25% on number of fatalities at public grade crossings, 25% on number of public grade crossings, and 25% on number of public crossings with passive warning devices.

Hazard elimination -- Balance of the Highway Infrastructure Safety authorization: 75% on population, 25% on public road mileage; 1/2% minimum. These funds can be used for grade crossing improvements if the State decides the crossing constitutes a hazard; no transfer is necessary.

Continues 90% Federal share.

ELIGIBILITY

Continues Hazard Elimination eligibility, which includes all public roads except Interstate.

Expands grade crossing eligibility to include all public grade crossings and certain private crossings where sufficient public benefit has been identified. Adds trespassing and enforcement.

TRANSFERABILITY

Allows flexing from grade crossing to hazard elimination to the extent that a State reduces the number of grade crossing crashes.

Broadens flexing from hazard elimination: If State has integrated safety planning process, may flex into non-infrastructure highway safety investments (402 and motor carrier safety).

KEY ISSUES

Revamps grade crossing funding formula to target safety problems and risks.

Ties ability to flex (from grade crossing to hazard elimination) to safety improvements.

Opens door for funding of non-infrastructure highway safety programs.

Integrated Safety Fund

Integrated Safety Fund is a new incentive grant designed to foster integrated safety planning. For States that have integrated safety planning (specific criteria to be developed in rulemaking), provides additional funds that can be used for any highway or traffic safety purpose within the Section 402 behavioral program, the Highway Infrastructure Safety Program, and the motor carrier safety program.

For qualifying States, the formula for distribution will be 75% on population, 25% on public road mileage; award not to exceed 50% of the State's FY 1997 Section 402 apportionment.

TRANSPORTATION ENHANCEMENTS

PROGRAM PURPOSE

Transportation enhancements (TE) are transportation-related activities that are designed to strengthen the cultural, aesthetic, and environmental aspects of the Nation's intermodal transportation system. The TE funds are intended for nontraditional community-oriented projects and features that go beyond standard transportation mitigation. A TE project may stand alone as a separate project or may be a distinct part of a larger transportation project, whether existing or proposed. Examples of

allowable projects include the renovation and reopening of a historic railroad station as an intermodal facility and development of a pedestrian and bicycle trail along an abandoned railway.

FUNDING/FORMULA

Continues to be funded as a 10% set-aside from each State's Surface Transportation Program funds.

Increases funding for Transportation Enhancements by more than 30% over ISTEA levels.

ELIGIBILITY

Maintains the existing list of eligible transportation enhancement activities, i.e., the ten specific project activities listed in ISTEA.

Codifies the requirement that transportation enhancement activities must have a direct link to surface transportation.

VALUE PRICING PILOT PROGRAM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	*	$14M	$14M	$14M	$14M	$14M	$14M

* ISTEA authorized $25 million in FY 1997 for the Congestion Pricing Pilot Program, but the NHS Act redirected these funds to other uses.

PROGRAM PURPOSE

The objective of the Value Pricing Pilot Program (formerly the Congestion Pricing Pilot Program) is to encourage implementation and evaluation of value pricing demonstration projects in order to provide congestion relief and related air quality and energy conservation benefits.

FUNDING

Increases the Federal share on projects under this program to 100% (from 80%).

Removes funding caps for individual pilot programs.

Continues to allow authorized funds to be available for three years after the year in which they are authorized.

Reverts any unobligated allocations to the States and unallocated balances remaining with the Secretary at the end of the four-year period to the Surface Transportation Program.

Continues three-year project funding limitation which begins once the project has actually been implemented, not in the pre-project stage.

ELIGIBILITY

Continues to include singular or collective pricing of roads, highways, freeways, arterials, and streets for the purpose of reducing traffic congestion. Singular facility pricing may involve a bridge, tunnel, highway arterial, freeway, or intersection. Collective pricing may take place in a corridor or involve a core area or region-wide application. Pricing may be proposed on new facilities, currently untolled facilities, or on existing toll facilities. Charges may involve both peak-period surcharges and off-peak discounts.

Continues to include pre-project activities, such as the development of public involvement programs, activities designed to overcome institutional barriers to implementing congestion pricing, and funding for automated vehicle identification or tolling equipment and other capital and operational costs for pricing applications.

Increases the number of pilot programs eligible for funding to 15, where each program may cover one or more specific value pricing projects within the area.

Removes the three-program cap on the number of pilot projects which may allow tolls on the Interstate.

Permits value pricing projects to include single-occupant vehicle use on HOV lanes, if drivers pay a fee.

KEY ISSUES

Expands to allow toll revenues collected through pilot projects to be used for any surface transportation purpose.

Expands to require, at the project level, the consideration of the impact on low income drivers and the development of possible mitigation measures.

FORMULAS

PURPOSE

Apportionment formulas are the basis for distributing most program funds to the States. NEXTEA proposes a transition to formula factors that relate well to the objectives of the basic program elements. Equity adjustments are provided to ensure an orderly transition to this sounder, more logical basis for apportionment of Federal funds.

FORMULAS

National Highway System (NHS): **75%** according to a State's contributions to the Highway Account of the Highway Trust Fund (HA/HTF)as a percent of total HA/HTF contributions by all States; **15%** according to a State's Commercial Vehicle Contributions (CVC) to the HA/HTF as a % of total CVC

by all States; **10%** according to a State's public road mileage as a percent of total public road mileage within all States; ½% minimum; use the latest available data.

Surface Transportation Program (STP): **70%** according to a State's contributions to the HA/HTF as a percent of total HA/HTF contributions by all States; **30%** according to a State's total population as a percent of total population within all States; ½ % minimum; use latest available data.

Retain Current Formula for Interstate Maintenance (IM) (i.e., **55%** Interstate lane miles; **45%** Interstate vehicle miles traveled; ½% minimum).

Retain Current Formula for Highway Bridge Replacement and Rehabilitation Program (HBRRP) (i.e., **100%** of the relative share of costs to repair deficient bridges; 1/4% minimum; 10% maximum).

Special Note on Interstate Reimbursement Program: The Administration is proposing reauthorization of the Interstate Reimbursement Program at $1 billion annually, or a total $6 billion over the reauthorization period. State shares for this program are based on each State's original cost of constructing routes which later became part of the Interstate System.

Other Revised Formulas: Apportionment formulas for Congestion Mitigation and Air Quality Improvement (CMAQ) and Highway Infrastructure Safety are revised (see individual fact sheets).

EQUITY ADJUSTMENTS

NEXTEA equity adjustments provide for an orderly transition from current law formula factors to alternative formula factors that relate well to program purpose and goals, but in a fashion which will not abruptly alter any State's apportionment dollars from one year to the next. NEXTEA discretionary allocations (Public Lands Discretionary, Bridge Discretionary, Scenic Byways, etc.) are <u>not</u> calculated in the base for these equity adjustments. Following are the formulas for the three proposed equity adjustments:

Minimum Allocation (MA): Each State receives apportionments of at least 90% of its percent contributions to the HA/HTF.**

90 Percent of Apportionments: Each State receives apportionments of at least 90% of its prior year's dollar apportionments throughout NEXTEA years. <u>Special Provision for Alaska</u>: Alaska will receive 90% of its FY 1997 apportionments in FY 1998 (like all other States), and 100% of its prior year's dollar apportionments thereafter (unlike all other States), throughout all years of NEXTEA.**

****Combined funding for the MA and 90 Percent of Apportionments equity adjustments is capped at $790M for FY 1998, $674M for FY 1999, $583M for FY 2000, $528M for FY 2001, and $508M for FY 2002-2003.

State Percentage Guarantee: Each State's share of NEXTEA annual apportionment dollars received must equal at least 95% of its average ISTEA (FY 1992-97) percent apportionments throughout all NEXTEA years. In order to accomplish this, adjustments are made within the STP apportionments. <u>Special Provision for Massachusetts</u>: In calculating each State's average ISTEA % apportionments,

Massachusetts' annual Interstate Completion funds, which were significantly higher than all other States under ISTEA, shall be capped at the level of the next highest State.

STATE INFRASTRUCTURE BANK PROGRAM

Year	1997	1998	1999	2000	2001	2002	2003
Authorization	$150M*	$150M	$150M	$150M	$150M	$150M	$150M

* FY 1997 DOT Appropriations Act provided $150 million from the General Fund.

PROGRAM PURPOSE

The State Infrastructure Bank (SIB) program provides States with a new capability for financing infrastructure investment to complement the Federal-aid program. Originally limited to ten States, a new SIB program will offer all States ready to implement a SIB the opportunity to provide financial assistance to Title 23-eligible highway, transit, and railway projects.

The SIB program is designed to give States the potential to increase the efficiency of their transportation investments and significantly leverage Federal resources by allowing them greater flexibility in the use of their Federal funds to attract non-Federal public and private investment.

FUNDING

Continues requirement that States must keep separate accounts for highway and transit.

$150 million/year in Federal seed money for capitalization grants will be awarded on a discretionary basis among States with SIBs, to be deposited into either the highway or transit account of the SIB.

States can further capitalize their SIB with up to 10% of funds from the following categories:

1) For the highway SIB account -- National Highway System, Surface Transportation Program, Interstate Maintenance, Highway Bridge Replacement and Rehabilitation Program, Interstate Reimbursement, and equity adjustment programs.

2) For the transit SIB account -- urbanized and non-urbanized area formula programs and the major capital investment program.

These funds will be disbursed at a flat 20%/year outlay rate over five years.

SIBs offer a menu of loan and credit enhancement assistance (e.g., direct loans, interest rate subsidies, lines of credit, and loan guarantees). As loans are repaid, the SIB funds are replenished and thus become available to provide financial assistance to additional transportation projects.

ELIGIBILITY

SIB-assisted projects eligible for highway account assistance have been expanded to include all projects eligible under Title 23.

SIB-assisted projects eligible for transit account assistance must be Title 49 capital transit investment projects.

THE TRANSPORTATION INFRASTRUCTURE CREDIT ENHANCEMENT PROGRAM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	. . .	$100M	$100M	$100M	$100M	$100M	$100M

PROGRAM PURPOSE

The new Transportation Infrastructure Credit Enhancement Program will provide $100 million/year in grants to assist in the funding of nationally-significant transportation projects that otherwise might be delayed or not constructed at all because of their size and uncertainty over timing of revenues. The goal is to encourage the development of large, capital-intensive infrastructure facilities through public-private partnerships consisting of a State or local government and one or more private sector firms involved in the design, construction or operation of the facility. It will encourage more private sector and non-Federal participation, and build on the public's willingness to pay user fees to receive the benefits and services of transportation infrastructure sooner than would be possible under traditional funding techniques.

REVENUE STABILIZATION FUNDS

Grants under this program (limited to 20% of project costs), together with any supplemental contributions by States and other entities, will comprise a Revenue Stabilization Fund for each project, to be used to secure external debt financing, or to be drawn upon if needed to pay debt service costs in the event project revenues are insufficient. These debts will not be considered "Federally guaranteed" under the Internal Revenue Code, thus allowing the program to be used in connection with either taxable or tax-exempt bond issues.

ELIGIBILITY

Any publicly-owned project that is eligible for Federal assistance through regular surface transportation programs under title 23 or title 49 would be eligible for the Federal Credit Enhancement Program. This includes new facilities as well as renovation or expansion of existing highway facilities, mass transit facilities and vehicles, intercity passenger rail facilities and vehicles (including Amtrak), publicly owned freight rail facilities, and various publicly owned intermodal facilities.

PROJECT SELECTION

The Secretary, in consultation with the Secretary of the Treasury, will determine a project's eligibility, then select among potential candidates based on both quantitative and qualitative factors. In order to be considered, a project must first meet the following criteria:

(1) Cost at least $100 million or 50% of a State's annual Federal-aid apportionments, whichever is less.

(2) Be supported, at least in part, by user charges or other dedicated revenue sources.

(3) Be included in a State's transportation plan and program.

(4) Be "nationally significant" -- resulting in major economic benefits through more efficient and cost-effective movement of people and goods.

(5) Be unable to obtain financing on reasonable terms from other sources.

Qualified projects meeting the initial threshold eligibility criteria would then be evaluated and selected based on the extent to which they leverage private capital, their overall credit worthiness, and other program goals.

TOLL ROADS, BRIDGES, AND TUNNELS

PROGRAM PURPOSE

To provide States with greater flexibility and financing options, a change is proposed in Federal toll law to permit States to levy tolls on Interstate highways under the same conditions as tolls are now permitted on all other Federal-aid highways, bridges, and tunnels.

ELIGIBILITY

Continues the current eligibility of Federal-aid highway funding for five broad categories of toll activities:

1) Initial construction of toll highways, bridges, or tunnels

2) 4R work on existing toll facilities

3) Reconstruction or replacement of free bridges or tunnels and conversion to toll

4) Reconstruction of free highways and conversion to toll

5) Preliminary feasibility studies for toll construction activities

Expands the eligibility of Federal-aid highway funding for toll activities by eliminating the current exclusion of Interstate routes, which occurred under numbers 1 and 4 above. The initial construction of Interstate toll roads and the reconstruction of existing toll-free Interstate routes and conversion to toll would now be eligible for Federal-aid highway funding.

FEDERAL SHARE

Continues the current Federal share for eligible toll activities at 80%.

TOLL AGREEMENT

Continues to require a toll agreement for Federal-aid funded toll projects documenting acceptable uses of toll revenues. Toll revenues in excess of those needed to adequately maintain the tolled facility can be used for any surface transportation project.

State and Local Funding for Toll Highways (New Flexibility for Interstates)

Title 23, Section 301, requires that all highways constructed with Federal-aid highway funding under Title 23 remain free from tolls, except as provided in Section 129. Therefore, public highways that had not utilized Federal funding under Title 23 could be converted to toll by the responsible highway authority with no Federal involvement. Under ISTEA, Federal-aid funds could not be used for construction and conversion of existing toll-free Interstate routes to toll nor for construction of new toll Interstate highways. Also, existing-toll free Interstate routes constructed under Title 23 could not be reconstructed and converted to toll using State or local funds. With the proposed modification as noted above under Eligibility, Interstate routes could be reconstructed and converted to toll, or new toll Interstate highways could be constructed with either Federal-aid highway or other funding sources, as long as the appropriate toll agreement is executed.

PILOT PROGRAM

Eliminates the pilot program for toll facilities, currently under Section 129(d), which has accomplished its intended purpose.

METROPOLITAN PLANNING

PROGRAM PURPOSE

The metropolitan planning process establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas and is administered jointly by FHWA and FTA.

CONTINUING PROVISIONS

Responsibility of local officials, in cooperation with the State and transit operators, for determining the best mix of transportation investments to meet metropolitan transportation needs.

Federal reliance on the metropolitan planning process, established in the early 1960s and strengthened under ISTEA, as the primary mechanism for making State and local transportation decisions on the use of Federal funds in metropolitan areas.

Emphasis on tailoring the planning process to fit the complexity of problems.

Responsibility of Metropolitan Planning Organizations for adopting the plan.

A 20-year planning perspective, air quality consistency, fiscal constraint, and public involvement established under ISTEA.

Emphasis on fiscal constraint and public involvement in the development of three-year Transportation Improvement Programs (TIP).

Emphasis on alternatives to capacity additions through the Single Occupant Vehicle project limit in larger metropolitan areas which are nonattainment areas for air quality.

Relationship of transportation planning and air quality boundaries in effect on September 30, 1996.

Requires a Congestion Management System in larger metropolitan areas.

Requires major transportation mode operators be included in the membership of large MPOs if redesignated.

DOT certification of the planning process in larger metropolitan areas.

Funding currently in place for metropolitan transportation planning.

KEY MODIFICATIONS

Simplifies planning factors by focusing on seven broad issues to be considered in the planning process (same as for statewide planning).

Modifies the general objectives of the planning process to include operations and management of the transportation system.

Encourages comprehensive planning through coordination with other planning activities such as housing, land use, etc.

Adds freight shippers to list of stakeholders to be given opportunity to comment on plans and TIPs.

Reduces population threshold for designating and redesignating an MPO from 75% of affected population, including the central city, to 51% of the affected population, including the central city.

Modifies provision for designating multiple MPOs in urbanized areas, adding a requirement for MPO and DOT Secretary concurrence.

Adds a requirement for MPO, State, and transit agencies to cooperate in the development of financial estimates that support plan and TIP development.

Enhances coordination requirement for air quality and transportation plans by extending it from Transportation Control Measures to the entire air quality and transportation plan process.

Includes particulate matter nonattainment boundary as a consideration in establishing metropolitan planning area boundaries.

Clarifies the distinction between project selection and TIP development (project selection means implementation from a cooperatively developed TIP).

Modifies sanctions for not being certified. Current penalty is withholding 20% of STP funds; this is revised to allow the Secretary to withhold all or part of Title 23 or Title 49 funds.

STATEWIDE PLANNING

PROGRAM PURPOSE

The statewide planning process establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions throughout the State and is administered jointly by FHWA and FTA.

CONTINUING PROVISIONS

Federal reliance on the statewide transportation planning process, established under ISTEA, as the primary mechanism for cooperative decision making throughout the State (the planning process is conducted cooperatively with local officials).

Need to coordinate statewide planning with metropolitan planning and to provide opportunity for public involvement throughout the planning process.

Emphasis on fiscal constraint and public involvement in the development of a three-year Statewide Transportation Improvement Program (STIP).

Emphasis on tailoring the planning process to fit the complexity of problems.

Emphasis on involving and considering the concerns of Tribal governments in planning.

Funding currently in place for statewide transportation planning.

KEY MODIFICATIONS

Simplifies planning factors by focusing on seven broad issues to be considered in the planning process (same as for metropolitan planning).

Adds provision that the concerns of rural officials with jurisdiction over transportation are to be considered in making transportation decisions in both the plan and the STIP.

Adds a provision that the Secretary, prior to approving the STIP (at least every two years), must determine if the planning process producing the STIP is consistent with the statewide and metropolitan planning requirements.

Clarifies the distinction between project selection and TIP development (project selection means implementation from a cooperatively developed TIP).

Clarifies language that metropolitan area projects in the STIP are to be the same as in the approved TIP.

Encourages comprehensive planning through coordination with other planning activities in areas such as housing and land use.

Modifies the general objectives of the planning process to include operations and management of the transportation system.

Clarifies the focus on a 20-year planning horizon for the transportation plan.

Strengthens language concerning the intermodal nature of the State transportation system as an integral part of the Nation's intermodal system.

Adds particulate matter to the list of pollutants for nonattainment consideration.

Adds freight shippers to list of stakeholders that must be afforded an opportunity to comment on the plan and STIP.

Adds a provision that only regionally significant Federal lands projects need to be individually identified in the STIP.

INTERMODAL TRANSPORTATION R&D PROGRAM

Year	1997(ISTEA)	1998	1999	2000	2001	2002	2003
Authorization	...	$10 M	$15M	$20M	$25M	$30M	$35M

PROGRAM PURPOSE

To conduct long-term, higher-risk, inter/multi-modal research that will continue the steady advances in transportation technology necessary to meet the demands of the 21st century.

Focused by strategic planning and assessment studies, these technologies later become the basis for partnership initiatives to bring about implementation.

PROGRAM STRUCTURE AND FUNDING

RSPA will manage a program of "enabling research" that focuses on five long-term research areas:

1) Human performance and behavior

2) Advanced materials

3) Computer, information, and communications systems

4) Energy and environment

5) Sensing and measurement

6) Tools for transportation modeling and design

KEY PROVISIONS

Recognizes that innovations in transportation generally result from application of disciplines not specific to transportation. Continual research in these areas is necessary, but the long-term nature and diffuse benefits of such research may be insufficient to motivate private investment.

Augments R&D conducted to address specific concerns of modal administrations with research focused on broader national needs.

Provides for conduct of research that:

1) Supports long-term national transportation goals.

2) Offers benefits too widely spread for any potential sponsor to capture returns on its investment.

3) Presents a risk too great relative to needed investment for any potential sponsor tobear alone.

4) Offers benefits too far in future to meet private investment criteria.

Facilitates departmental leverage of transportation-related research conducted by other Federal agencies and academia.

STRATEGIC PLANNING FOR RESEARCH & TECHNOLOGY

PROGRAM PURPOSE

The strategic planning process provides the Secretary with a corporate mechanism for determining national transportation R&T priorities, coordinating Federal transportation R&T activities and measuring the impact of such R&T investments on the performance of the national transportation system.

PROGRAM STRUCTURE AND FUNDING

RSPA's FY 98 request for program funding includes resources to support the Secretary in implementing the strategic planning process.

KEY PROVISIONS

Provides the Secretary with greater flexibility in structuring a research and development oversight process which should prove useful to States and local governments in developing and carrying out their own R&T initiatives.

Directs the Secretary to establish a strategic planning process for research and technology which considers the need to:

1) Coordinate transportation planning at all government levels

2) Ensure compatibility of standards-setting with concept of seamless transportation

3) Encourage innovation

4) Facilitate partnerships

5) Identify core research to meet long-term needs

6) Ensure the nation's global competitiveness

7) Measure impact of investments on system performance

Authorizes the Secretary to consult with other Federal entities involved in transportation research and to make appropriate use of the capabilities resident in Federal laboratories.

Authorizes the Secretary to adopt procedures to validate the scientific and technical assumptions underlying DOT's R&T plans.

Gives Secretary broad discretion in implementation, including use of an interagency executive council or a board of science advisors.

Recognizes the need to foster cooperation in research and technology planning among government, academia and industry in addressing the nation's transportation goals.

FHWA RESEARCH AND TECHNOLOGY

PROGRAM PURPOSE

The Research and Technology Program researches, develops, and deploys transportation innovations and technologies through laboratories, test and evaluation, training, technology demonstrations, and public and private partnerships.

PROGRAM STRUCTURE AND FUNDING

Restructures Research and Technology Program to focus on four key areas, listed below. Part of the program receives separate authorizations (all with contract authority) in NEXTEA, while other elements of the program are funded from the FHWA's general operating expenses. (*See the FHWA Research and Technology Funding fact sheet for details on the 1998 funding levels.*)

1) Initiates a National Technology Deployment Initiatives Program to expand the adoption of innovative technologies by the surface transportation community in seven goal areas. This replaces the current Applied Research and Technology Program. Funding levels are $56 million per year for fiscal years 1998-2000, then $84 million for years 2001-2003. A significant portion of these funds is planned to be allocated to States to fund deployment of innovative technology.

2) Initiates a Professional Capacity Building and Technology Partnerships Program that brings together technology transfer programs and activities, including education and training efforts, that focus on equipping people to use new technology. Existing programs that are encompassed under this program are the Local Transportation Assistance Program ($12 million/yr), the National Highway Institute ($8 million/yr for 1998-2000 and $14 million/yr for 2001-2003), Eisenhower Transportation Fellowship Program ($2 million/yr), and Technology Partnership Support (formerly SHRP Implementation) ($11 million/yr).

3) Continues the Long-Term Pavement Performance Program to test, evaluate and collect data on various types of pavements ($15 million/yr for 1998-2003) and initiates an Advanced Research Program to address longer-term, higher-risk research ($10 million/yr for 1998-2000 and $20 million/yr for 2001-2003).

4) Continues the State Planning and Research Program. Funding continues to come from a 2% set-aside of a State's apportionments of most Federal-aid program funds.

ELIGIBILITY

Continues authority of the Secretary to engage in research, development, and technology transfer activities with respect to motor carrier transportation and all phases of highway planning and development.

Continues authority of the Secretary to carry out the research and technology program independently or through cooperative agreements, grants, and contracts.

Initiates the inclusion of the private sector and the international community as sources of products for technical innovation and as recipients of training and technology transfer activities.

Continues authority of the Secretary to undertake and continue, on a cost-shared basis, collaborative research and development with non-Federal entities for the purposes of encouraging innovative solutions to highway problems and stimulating the marketing of new technology by private industry.

FHWA RESEARCH AND TECHNOLOGY FUNDING

(Dollars in Millions)

		FY 1997	FY 1998
FEDERAL-AID PROGRAM (CONTRACT AUTHORITY):			
	ITS/ITI Incentive Deployment	$0.000	$100.000
	FHWA Research and Technology Programs:		
	Intelligent Transportation Systems	$113.000	$96.000
1	University Transportation Centers	6.000	6.000
1	University Research Institutes	6.250	6.000
	Local Transportation Assistance Program	[6.000] 2	12.000
	Tech. Partnership Support (formerly SHRP Implementation)	[14.000] 2	11.000
	Long-Term Pavement Performance	[6.000]	215.000
	Eisenhower Transportation Fellowship Program	[2.000] 2	2.000
	National Tech. Deployment Initiatives (formerly App.Res.& Tech.)	[41.000]2	56.000
	Seismic Research and Development Program	[2.000] 2	0.000
	National Highway Institute	0.000	8.000
	Advanced Research	0.000	10.000
	Subtotal	$125.250	$222.000
LIMITATION ON GENERAL OPERATING EXPENSES (LGOE):			
	Research Programs:		
	Highway Research and Development	$67.124	$69.653
	Sustainable Transportation Initiative -- Research & Pilot Program	0.000	4.250
	Intelligent Transportation Systems	120.358	54.000
	Technology Assessment and Deployment	13.811	14.800
	Local Technical Assistance Program	2.827	0.000
	National Highway Institute	4.269	0.000
	Rehabilitation of Turner Fairbank Highway Research Center	0.500	2.000
	Research and Development Technical Support	0.000	10.000
	Global Position Systems Oversight	0.000	2.100
	National Advanced Driver Simulator	0.000	12.250
		$208.889	$169.053
3	Total, Research and Technology Programs	$405.139	$491.053

1 Administered by the U.S. DOT's Research and Special Programs Administration.

2 In FY 1997, these programs, totaling $71 million, were funded from the administrative takedown.The R&T

3 total listed for FY 1997 includes $125.250 million for R&T contract authority programs, $71 million for R&T programs funded from the administrative takedown, and $208.889 million from LGOE funds.

INTELLIGENT TRANSPORTATION SYSTEMS

PROGRAM PURPOSE

ISTEA launched a program of research, testing, and technology transfer of intelligent transportation systems (ITS) aimed at solving congestion and safety problems, improving operating efficiencies in transit and commercial vehicles, and reducing the environmental impact of growing travel demand. NEXTEA continues this research, testing, and technology transfer program, and also launches the integrated, intermodal deployment of proven technologies that are technically feasible and highly cost-effective. The result will be a 21st Century national system, using common standards and common architecture.

ITS RESEARCH, TESTING, AND TECHNOLOGY TRANSFER

(See FHWA Research and Technology Funding fact sheet)

Continues 80% Federal share; funding match requirement can be waived for innovative research activities.

Will focus on the demonstration and evaluation of fully integrated intelligent vehicle systems.

INTELLIGENT TRANSPORTATION INFRASTRUCTURE DEPLOYMENT INCENTIVES PROGRAM

Funded at $100M/year for 1998-2003.

Provides funding to State and local applicants to support integration (not components) of metropolitan area travel management intelligent infrastructure, intelligent infrastructure elements in rural areas, and Commercial Vehicle Information Systems and Networks (CVISN) deployment within States and at border crossings. These funds are a sweetener to encourage integrated deployment, as well as innovative financing and public/private partnerships.

Limits Federal share to 80%; not to exceed 50% from Deployment Incentive funds; remaining 30% of Federal share may be funded from other FAH and transit apportionments.

Establishes annual award funding limitations as follows:

1) $15 million per metropolitan area

2) $2 million per rural project

3) $5 million per CVISN project

4) $35 million within any State

Establishes funding priorities as follows:

1) At least 25% for implementation of CVISN and international border crossing improvements.

2) At least 10% for other deployment outside metropolitan areas.

Replaces the IVHS Corridors Program; currently designated Priority Corridors are eligible for funding.

OTHER KEY PROVISIONS

Requires the Secretary to develop a National Architecture and supporting standards and protocols to promote interoperability among ITS technologies implemented throughout the States. Use of approved standards and protocols is required as a prerequisite for use of Federal-aid funds to implement ITS technology and services.

Requires the Secretary to take necessary actions to secure a permanent spectrum allocation for Dedicated Short Range Communications.

Makes explicit the authority of States and local entities to use specified core infrastructure programs, highway and transit, for ITS implementation, modernization, and operations and maintenance activities.

Requires life-cycle cost analyses when Federal funds are to be used to reimburse operations and maintenance costs and the estimated initial cost of the project to public authorities exceeds $3,000,000.

Mandates updating the ITS National Program Plan.

Expands technical assistance to include training and building of professional capabilities.

Directs the Secretary to develop guidance and technical assistance on appropriate procurement methods for ITS technology and services.

PROGRAM STREAMLINING

PURPOSE

A variety of statutory changes are proposed to eliminate or simplify Federal requirements and to allow greater flexibility to States, MPOs, and local governments.

PROGRAM DELIVERY

Establishes annual program-wide approval for STP projects, rather than the current quarterly project-by-project certification and notification.

Removes a restriction that applies Federal share to each progress payment to the State and allows a variable Federal share on progress payments.

Removes a restriction that prohibited reimbursement of certain indirect costs to the States, thereby making Federal-aid highway funding more compatible with grants from FTA and other Federal agencies.

Removes 15% limitation on project Construction Engineering charges, thereby allowing reimbursement of actual costs for CE.

Permits merger of PS&E approval and Project Agreement execution and provides for obligation of Federal share on a project when the Project Agreement is executed.

Restores provision to allow reobligation in the current fiscal year of Federal funds released from prior year obligations.

PROJECT OVERSIGHT

Expands flexibility to States and FHWA to mutually determine the appropriate level and extent of State and FHWA oversight on NHS projects.

Provides that FHWA's oversight responsibilities shall not be greater than they are under Certification Acceptance and ISTEA, unless the State and FHWA mutually decide otherwise.

Provides that State must assume Title 23 oversight responsibilities on non-NHS projects. (FHWA would retain oversight responsibility for non-Title 23 requirements, e.g., NEPA, on all projects.)

Provides for development of a financial plan for any project with an estimated cost of $1 billion or more.

PROCEEDS FROM SALE OR LEASE OF REAL PROPERTY

Retains provisions allowing States to use net proceeds generated by sale or use of property for purposes eligible under Title 23. (I.e., States don't have to turn these revenues in to the Federal government).

Expands application to cover all proceeds generated from sale or lease of property acquired with Federal funds, instead of just airspace income.

REAL PROPERTY ACQUISITION AND CORRIDOR PRESERVATION

Affirms that early acquisition of property in support of preservation considerations is appropriate public policy.

Rescinds the Federal Right-of-Way Revolving Fund by ending new obligations and setting time limits for repayment of old obligations.

Retains potential for retroactive Federal funding of early right-of-way acquisition as an option.

Allows a State to receive credit to State matching share for value of State and locally owned property incorporated in a federally funded project.

9.3 PRIVATE FUNDING POTENTIAL

A new and much-needed source of funds is based on the potential for public/private partnerships. The private role is increasing in this arena. It is one in which the private entity may provide ITS services and/or system elements; however, instead of direct reimbursement from the public agency, some or all of the private entity's costs for these funtions are recouped by selling ITS-based services to other private entities (i.e., collecting a user fee or deriving revenue from advertising) or by receiving a non-monetary consideration for these services from the public agency. This offers advantages both in public cost reduction and in capitalizing on the private-sector's market orientation. Several examples of this latter concept of public-private partnerships are being developed in the United States, including:

- Marketing and sales of in-vehicle and portable devices to provide real-time traveler information and routing.
- The government agency providing access to the highway right-of-way to a private communications firm, in return for which the private entity installs and maintains a communications network (e.g., conduit, cable, and electronics) for the government agency's ITS network. The private communications firm recoups the cost of the communications system by sizing it to provide telecommunications services to other users (e.g., other private entities) and charging for the service.
- Collection, marketing, and sales of real-time traveler information and traveler services information.

Developing sustainable public-private partnerships is proving difficult. Private-sector involvement is driven by the profit motive, and the potential profitability of certain ITS applications remains a major question in the eyes of potential private-sector players. There is also general mistrust by public agencies of the profit motive, and a distrust by the private sector of the stability of decisions that would be made in the public realm. Instability increases risk.

Successful partnerships with the private sector will likely be initiated by private-sector players who understand the market. However, additional exposure of the private sector to ITS is important and may generate other joint projects.

Areas or regions desiring strong, solid ITS programs must define and encourage the relationship between the public and private sectors, along with their respective responsibilities. Arranging joint meetings, conducting conferences on ITS, soliciting private input on typically public transportation issues, encouraging public/private cooperation, implementing legislation encouraging these relationships, becoming visible in private-group concems (without harm to public conflict-of-interest issues), developing a cooperative atmosphere/business climate, and openly promoting the ITS advantages to the private sector represent steps that need to be taken by the public side to encourage private participation. Some basic principles of developing public/private partnerships follow.

- Assist the private sector in areas of ITS that make good business ventures. While private companies may be "good citizens" in participating in ITS projects for a period of time, long-term commitment to ITS projects need to be justified, ultimately, by whether the company can make a profit be

- from that activity. It is critical that public agencies understand this a an essential element of a succesful private venture

- Structure projects to be self-monitoring. The private entity should have reason other than government regulation and enforcement to make certain that the project succeeds. There should be a built-in motivation for customer service that leads to additional profits. If the only force that holds the project together is the threat of government retribution, the project is likely to fail in the long run, and relationships will quickly turn adversarial.

- Be willing to take calculated risks. The private sector operates within an atmosphere of risk on a daily basis. From the government perspective, much of the risk will take place wither the perception of the public of "deals struck" with the private sector, or in the failure of the private sector to deliver on services traditionally provided by the government. These risks need to be addressed in the structure of the arrangements made for a particular ITS project.

- Be willing to alter the traditional rules by which State, MPO, and local governments operate. Legislative changes may be necessary to enable certain private sponsored ITS projects to occur.

- Provide an atmosphere of stability. Private partners are usually unwilling to move forward on projects where the public partner's decisions are unreliable. Unfortunately, there is only so much that staff can do to create this atmosphere. Political change introduces sometimes dramatic shifts in thinking concerning public decisions. Long-term commitments need to be locked in to engender the confidence of the private partner(s).

- Devise mechanisms that will protect both parties while not squelching the opportunity itself. This is where a balance needs to be achieved between willingness to take risks and building in necessary protections. Because government agencies have not traditionally negotiated in these areas with the private sector, experts with experience dealing with the private sector may need to be retained to guide the government agency through the process.

- Be willing to give up turf where there is a legitimate area for privatization.

- Leave room for competition. If there are profits to be made, and if there are ways to allow for multiple providers, the customer is best served by creating a competitive environment. The extent to which this is possible will depend on the specific nature of the ITS activity.

9.4 INNOVATIVE FINANCING

Through the innovative finance provisions contained in the Intermodal Surface Transportation Efficiency Act (ISTEA), the Test and Evaluation (TE) 045 program, and the National Highway System (NHS) Designation Act, the Federal Highway Administration (FHWA) has been reshaping the Federal-aid program's matching share requirements. Traditional grant-based pay-as-you-go financing has given way to more innovative techniques aimed at enhancing transportation investment and accelerating project implementation.

Some of these innovative finance tools are now available to states as part of the regular Federal-aid program. Some are still experimental. Four of the available matching share tools are flexible match, soft match, tapered match, and shared resources.

Flexible Match

The NHS Designation Act amended 23 U.S.C. 323 to allow states to apply the value of third party donated funds, material, or services toward their share of project costs. This flexible match provision increases a state's ability to fund its transportation programs by: 1) accelerating certain projects that

receive donated resources; 2) allowing states to reallocate funds that otherwise would have been used to meet Federal-aid matching requirements; and 3) promoting public-private partnerships by providing incentives to seek private donations. Third parties as defined by the NHS Designation Act include private companies, organizations, and individuals; Federal, state, and local government agencies are excluded by this definition.

The Maryland Department of Transportation (DOT) is one agency currently using flexible match to help finance the reconstruction and widening of a one-mile segment of MD 355. The route serves a rapidly expanding area of Montgomery County in the Washington, DC metropolitan area. The project involves expansion of MD 355 by one lane in each direction. Maryland DOT is crediting $8 million in private funds toward its matching share of project costs.

Soft Match

Section 1044 of ISTEA permits states to earn credits on toll revenue expenditures. These toll credits can then be applied toward the non-Federal matching share of current Federal-aid projects. The soft match provision of ISTEA increases the flexibility of state transportation finance programs by allowing states to use toll revenues when other state highway funds are not available to meet non-Federal share matching requirements.

The soft match provision of ISTEA requires states receiving toll credits to pass a "maintenance of effort" (MOE) test. The MOE test established under ISTEA requires a state to demonstrate "a continuing commitment to non-Federal transportation investment" by showing that its previous year's expenditures on transportation improvements are equal to or exceed the average of its previous three years' expenditures. Under TE-045, the MOE test is relaxed to allow for a more prospective view.

The New Jersey DOT, for example, is using a soft match to help finance the construction of a southbound viaduct over the Waverly Yards in Newark. The recent reconstruction of the northbound viaduct

has left the southbound viaduct demolished and the highway operating at 50 percent capacity. New Jersey DOT is expediting construction by applying $15 million in toll credits toward its share of the project costs.

Tapered Match

Tapered match allows states to vary the required matching ratio over the life of a project. With this tool, states can delay the use of their own funds while using Federal funds to bring projects through the critical early phases of construction. Although tapered match has been tested under the TE-045 experimental program, it is not available through the regular Federal-aid program.

The Washington State DOT is using a tapered match to help finance the construction of high occupancy vehicle lanes on SR 520 located northeast of Seattle. The project is necessary to accommodate the region's rapidly expanding traffic volumes and to enhance safety on the Evergreen Point Bridge. Tapering the Federal share will allow Washington State DOT to begin construction on the project a year earlier, while achieving better cash flow management.

Shared Resources

Shared resources are private donations of communications technology (principally fiber optic communications) granted in exchange for access to public rights-of-way. The use of shared resources is an invaluable tool for states seeking to build a technological backbone for Intelligent Transportation Systems (ITS). In addition to obtaining increased access to telecommunications technology, states can credit the value of the private donations toward their matching share of project costs associated with the deployment of ITS projects utilizing the donated technologies.

The shared resources concept has been limited to selected experimental projects, and has not been recognized as part of the regular Federal-aid program. In some states, shared resource arrangements may be prohibited by state law.

The Missouri DOT has entered into an agreement with Digital Teleport, Inc., which will provide the DOT with access to a 210-mile, $23 million fiber optic network to be located near St. Louis.

In return, Digital Teleport has been granted exclusive access to the public rights-of-way necessary for completing the project. In addition, FHWA has recognized the value of the donation and is allowing Missouri DOT to receive credit toward its matching share on ITS deployment projects in the St. Louis area.

9.4.1 PROVISIONS OF THE NATIONAL HIGHWAY SYSTEM

Changes to Advanced Construction

The U.S. Department of Transportation (U.S. DOT) can approve an application for advance construction for reimbursement after the final year of an authorization period provided the project is on the State's transportation improvement program (STIP). The STIP is fiscally constrained under section 135(f) of Title 23. This change also provides greater flexibility to States to engage in advance construction using their anticipated apportionments.

Debt Instruments for Reimbursements as Construction Expenses

States can be reimbursed with Federal-aid funds for bond principal, interest costs, issuance costs, and insurance on Title 23 projects. To date, Federal-aid funds have been limited to bond retirement costs on certain categories of projects and interest costs were only eligible on some interstate projects.

Federal Share on Toll Projects

This provision sets the Federal share for toll projects on highways, tunnels, and bridges at a maximum of 80 percent of eligible costs. Up until now, the Federal share for toll projects has varied from 50 to 80 percent, based on activity and system designation.

ISTEA Loan Provisions

States can loan Federal-aid funds to toll and non-toll projects with dedicated revenue streams. Interest rates on loans may be at or below market rates. A loan is not required to be subordinated to any other debt financing. Loan repayments can be used for various credit enhancements. A loan can be made for any phase of a project including engineering and right-of-way work.

Matching Credit

This provision allows private funds, materials, or assets to be donated to a specific Federal-aid project and permits the State to apply the value to the State's matching share. To date, States could only receive credit for State and local funds or for donations of private property incorporated into a Federal project.

9.4.2 INNOVATIVE OPTIONS

Partial Conversion of Advance Construction

Previously, if a State chose to convert an advance construction project to regular Federal-aid project funding, the State had to obligate the full Federal share of the project costs. This can be a major "drawdown" of the State's annual Federal obligation ceiling. Partial conversion of advance construction is a strategy which allows a State to obligate funds and receive reimbursement for only part of its funding of an advance construction project in a given year. In conjunction with legislative changes proposed for advance construction flexibility, this change will make using Federal funds more compatible with State financing needs. This change was implemented through Federal regulatory change on July 19, 1995.

ISTEA Section 1044 Investment Toll Credits

ISTEA Section 1044 permits a State to use certain toll revenue expenditures as a credit toward the non-Federal matching share of all programs authorized by Title 23 and ISTEA. This "investment credit" concept allows the Federal share to be increased up to 100 percent to the extent credits are available. States which meet or exceed the ISTEA Maintenance of Effort (MOE) test can earn credits for toll road expenditures. The idea behind the MOE test is for States to show they are keeping up their commitment to non-Federal transportation spending. States may now more easily earn these

credits under an expanded Maintenance of Effort test, which includes a prospective interpretation. This change was implemented through guidance memorandum on April 3, 1995.

9.4.3 STATE INFRASTRUCTURE BANKS (SIBS)

Meeting today's transportation infrastructure needs requires new flexibility and multiple financing strategies. In response to these needs, the State Infrastructure Bank (SIB) Pilot Program was approved by Congress in the National Highway System Designation Act of 1995. The initial legislation allowed U.S. DOT to approve ten state SIBs. Those States were Arizona, California, Florida, Missouri, Ohio, Oklahoma, Oregon, South Carolina, Texas, and Virginia. Recent legislation, passed in September 1996, will allow U.S. DOT to approve SIBs for additional qualified states.

SIBs will offer a variety of forms of financial assistance, support different types of projects at various stages of project development, and test different ways of capitalizing and operating their SIBs.

On March 1, 1997, the Secretary of the U.S. Department of Transportation reported to Congress on the SIB Pilot Program. The program goal is to understand how SIBs can leverage Federal dollars to increase transportation infrastructure investments as ISTEA reauthorization legislation moves forward.

By giving state and local officials new flexibility, SIBs will enable the development of vital construction projects that would otherwise be delayed or financially infeasible.

Capitalizing the SIB

A SIB begins with an initial infusion of Federal and a matching non-Federal contribution. States can deposit up to 10 percent of most of their FY 1996 and FY 1997 Federal-aid highway apportionment into their SIB highway accounts. States can also deposit up to 10 percent of Federal transit funds (sections 3, 9 and 18 funds) for FY 1996 and FY 1997 into their SIB transit accounts for capital projects. Each state will match Federal capitalization funds with 20 percent of the total deposit (or at their usual matching ratio).

Types of SIB Assistance

An SIB has myriad of financial support alternatives to assist a public or private project sponsor during all project stages. The spectrum of financial assistance a SIB may provide ranges from loans to credit enhancements. Other forms of assistance may include interest subsidies, letters of credit, capital reserves for bond financing, construction loans, and purchase and lease agreements for highway and transit projects.

An example of how SIB assistance might work is what Missouri plans to do. Funds will be held in the SIB to cover debt service reserve requirements as part of a future bond issuance for Highway 179. In this case, the funds are only used on an as needed basis.

Unlike traditional transportation funding, a SIB can provide assistance throughout all stages of transportation projects to a multitude of project sponsors. In addition, SIB assistance can be for any

amount or percentage of the project, also unlike the traditional transportation funding which has fixed percent contributions.

The initial use of Federal funds may be from separate accounts for eligible Title 23 and transit capital projects. As the funds are repaid, the SIB can provide financial assistance to transportation projects following state procedures.

Recent Legislation

Congress passed legislation in September, 1996 that enables U.S. DOT to designate additional qualified states to participate in the SIB pilot program. Previously, the program was limited to ten states. Congress also approved an additional $150 million to be distributed to the initial ten SIBs and any additional states designated for the program for capitalization. These funds cannot be distributed for 6 months, until additional states have been approved. The funds will be available to both highway and transit accounts of the SIB.

States' Planned Projects

As the states move from proposing projects to funding projects the number and type of projects may change. These projects are only under consideration and the specifics around the amount, type of assistance and repayment source may still need to be determined. The Pilot Program will provide an opportunity to review how well an SIB could assist a variety of projects and increase transportation infrastructure investment.

Credit Enhancement

Missouri is considering supporting the construction of Highway 179 in Jefferson City and Cole County. For this project, the SIB might provide either the county or city with debt service reserves for debt issuance. This means the SIB would hold funds as collateral for the bond issuance.

Low Interest Loans

Oklahoma proposes to provide low interest loans to local governments to improve safety at rail and grade crossings, a part of Title 23 construction. The local government might use a sales tax to repay the loan.

Construction Loans

In September, Ohio provided a $10 million preconstruction loan to the Butler County Transportation Improvement District for right-of way acquisition for a series of realignment, widening, and inter-change projects for State Route 129. The loan would be repaid from toll-backed bonds issued at the start of construction. Ohio expects to have completed financing agreements for two additional projects in September.

Administrative Details

Under the Pilot Program, SIBs are expected to evolve considerably as the states develop their cooperative agreements with U.S. DOT, broaden the types of assistance that they can provide, establish SIB administration, and identify projects that will receive SIB assistance.

The types of financial assistance that can be provided and to whom are determined by the enabling legislation each state has or expects to have in the near future. The lessons learned from applying diverse forms of assistance to a wide range of projects will be invaluable as the SIB Pilot Program progresses and ISTEA Reauthorization moves forward.

9.4.4 INNOVATIVE FINANCE GUIDANCE - NATIONAL HIGHWAY SYSTEM PROVISIONS

Section 313(b) replaced 23 U.S.C. 129(a)(7), relating to eligibility of State loans for Federal-aid reimbursement. The previous provision established the eligibility of State loans for construction of toll facilities for Federal-aid reimbursement. The NHS Act amendment expanded eligibility of loans to include State loans to non-toll facilities with a dedicated revenue source for Federal-aid reimbursement. Further, the States were given greater flexibility in determining the interest rates for loans and given the authority to use loan repayments for additional credit enhancement activities.

The ISTEA amended Section 129 to allow Federal participation in a State loan to a toll project. This provision was implemented by memoranda from FHWA Headquarters dated March 12, 1992, and May 14, 1993. Section 313 of the NHS Act amended the loan provisions of Section 129(a)(7).

The purpose of this guidance is to consolidate in one document, information on the loan provisions of Section 129(a)(7) contained in the two previous memoranda, modified as appropriate to implement the NHS Act amendments. The following provides implementing guidance on the Section 129(a)(7) loan provisions.

Eligibility

Section 129(a)(7)(A) allows the State to make loans to a public or private entity that is constructing, or proposing to construct, a toll project that is eligible for Federal-aid funding or a non-toll highway project with a revenue source specifically dedicated to support the project. The State may request authorization of a project for the purpose of making a loan to the public or private entity. The amount loaned by the State is considered an eligible Federal-aid project cost.

There are no Federal requirements that apply to how a State selects a public or private entity to be a recipient of a State loan. This selection process, including creation of public/private partnerships, is governed by State law. Further, it is the State's responsibility to ensure that the loan recipient has used the loan for the purposes specified.

Dedicated Revenue Source - Non-Toll Projects

A specifically dedicated revenue source is a revenue source that the loan recipient or other appropriate entity pledges for repayment of the loan. Revenue sources can include, but are not limited to, excise taxes, sales taxes, real property taxes, motor vehicle taxes, incremental property taxes, or other beneficiary fees. (However, there are criteria that limit use of airport revenues as a dedicated revenue source, and any proposal to use airport revenues must receive FHWA Headquarters' concurrence prior to authorization of the loan.)

The pledge for repayment may involve all or only a portion of a revenue source or a combination of various revenue sources. In requesting authorization of Federal-aid funding for a loan to a project with a dedicated revenue source, the State will identify the dedicated revenue source(s) and provide written assurance that a pledge has been secured regarding use of the revenue sources(s) for repayment of the loan.

Authorization

If a project meets the test for eligibility, a loan can be made at any time. The loan may be for any amount, provided the maximum Federal share of the total eligible project cost is not exceeded. Total eligible project cost is limited to the costs of engineering, right-of-way acquisition, and physical construction remaining to be accomplished at the time the FHWA authorizes the loan to be made. In other words, a loan can be initiated on an active, eligible project, but the amount cannot include the cost of work done prior to the loan authorization. A loan project can be authorized under the advance construction provisions of 23 U.S.C. 115 that apply to the type of Federal-aid funds being used.

Federal-aid funds for loans may be authorized in increments. Federal-aid funds are obligated in conjunction with each incremental authorization. The State is considered to have incurred a cost at the time the loan, or any portion of it, is made. Federal funds will be made available to the State at the time the loan is made.

Federal Share/Non-Federal Share

The Federal share for a loan project under Section 129(a)(7) is established by Section 129(a)(5). Accordingly, the Federal share is 80 percent and may not be adjusted in accordance with a sliding scale under 23 U.S.C. 120. The non-Federal share may be provided by the public or private entity receiving the loan.

Compliance with Federal Laws

The State must ensure that the project is carried out in accordance with Title 23 and other applicable Federal laws, including any environmental and right-of-way provisions included in Federal law. The only exception, discussed under "Other Issues," concerns procurement of consultants or contractors by a private entity or toll authority. The initial toll or non-toll project for which a State has requested Federal payment for a loan is viewed as a Federal-aid project subject to the same basic requirements and FHWA oversight responsibilities which are being followed for comparable non-loan Federal-aid projects.

Subordination of Debt

At a State's option, the amount of any loan eligible for Federal reimbursement under Section 129(a)(7) may be subordinated to any other debt financing for the project.

Repayment/Terms of Loan

Loans must be repaid to the State. The repayment must begin within 5 years after the project is completed and opened to traffic and must be completed within 30 years after the date Federal funds are authorized for the loan or first increment of the loan. Interest on the loan is at or below market rates, as determined by the State, to make the project which is receiving the loan feasible.

Subsequent Use of Repaid Amounts

The State may use repaid amounts for:

- Any project eligible under Title 23, or
- The purchase of insurance or for use as a capital reserve for other forms of credit enhancement for project debt in order to improve credit market access or to lower interest rates for projects eligible under Title 23.

No Federal requirements attach to activities advanced with funds repaid to the State.

Other Issues

Loan guarantees are not an eligible activity under the Section 129(a)(7) loan program. However, a reimbursable Section 129(a)(7) loan could well act as credit enhancement where a public or private entity is seeking market financing for a project.

Federal funds can participate in the construction of a toll facility or a non-toll facility with a dedicated revenue source either through a direct commitment of funds to the project (a regular Federal-aid construction project) or through a loan(s) to the public or private entity building the project. A State could also choose to use its Federal-aid funds to finance a portion of a project as a regular Federal-aid project and use a reimbursable loan for another portion of that project.

If Federal funding involves a regular Federal-aid project, the consultants or contractors used on the Federal-aid project must be selected under the Brooks Act or Title 23 competitive bidding procedures, respectively. However, if the Federal-aid funding is only via a Section 129(a)(7) loan project to a private entity or toll authority, that entity is allowed to select the consultant or contractors in whatever manner it sees fit as long as the selection process follows State laws and procedures.

The Automated Traffic Surveillance and Control (ATSAC) system in Los Angeles, for example, used nontraditional funding sources that included Federal and State gasoline taxes, as well as city fees on development projects that generate increased traffic flow and therefore increase the city's traffic control costs. Additional funding was secured through innovative bartering arrangements. CalTrans, the State transportation authority, financed two segments in return for the city's help in managing traffic diversions to accommodate freeway resurfacing projects. Private developers and independently

funded public institutions like the University of California at Los Angeles financed other segments of the system in exchange for traffic mitigation credits needed to obtain environmental permits for construction projects. These financial innovations have raised the nearly $130 million spent to date.

The Allocation and Decisionmaking Process for Regular Federal Funding Surface Transportation Program (STP) and Congestion Management and Air Quality (CMAQ) funds are the most regularly used funds available to local agencies for implementing ITS projects. Some states and MPOs suballocate these funds to jurisdictions within the urban area while others require all types of projects to compete for funding regardless of jurisdictional split. Another model is to allocate funds to specific programs based on goals and then to have projects compete within the program. While local governments rely on STP and CMAQ funds for ITS projects, States can use Interstate and National Highway System (NHS) funding for ITS projects. The concern of local officials interviewed was for the equitable allocation of the total federal funding pot to the area and in particular to the central city. The ability of the M.O. or the sponsoring ITS agency to blend funding from the various sources creates the best chance for success for an areawide ITS program. The section on pending Federal legislation raises some important issues on the future of federal funding for ITS.

The ITS program is somewhat unique in that the FHWA has been authorized approximately $660 million for ITS programs and the federal government has the responsibility for allocating these funds rather than the states. This issue is also discussed further in the federal legislation section, but those interviewed were unanimous in agreeing that the availability of special federal funding has greatly enhanced the success of ITS programs. The availability of these funds for early deployment studies, priority corridors, operational tests and model deployment activities were seen as important factors in the success of ITS programs. The converse should be addressed also. The success of the ITS programs in some areas has attracted further ITS special funding, while those areas struggling to implement an ITS program have not been as successful. This issue will be discussed in the federal reauthorization process but the Task Force might want to discuss this issue as well. The participants in the four priority corridor areas were particularly enthusiastic on the usefulness of the program and funding to create technology platforms to implement the ITI. In fact the primary conclusion of the U.S. DOT policy review of the priority corridors program was the success of the program in regional institution building.

State and Local Funding Sources

Almost all states have a trust fund for highways and in some cases for other modes of transportation. The existence of state funding over and above that required for matching federal funding was viewed as a factor influencing the success of implementing the ITI. Houston and Los Angeles and to some degree New York have state pots of funds available to increase mobility. The availability of state funding also has some issues. Some Transportation Trust Funds are highly leveraged through the use of bonds. Certain types of projects, (e.g., small operational improvements, equipment with a short useful life and operations and maintenance costs) are usually not eligible for bonding. Some of the ITS projects fall into these categories. Also some states have constitutional or legislative restrictions on the use of state funds on non-state jurisdictional highways or for narrowly defined highway purposes. The structure of state funding in each area needs to be reviewed as part of the ITI implementation process.

Appendix L presents a case study of ITS funding approach in Orange County, California.

9.5 CASE STUDIES ON FINANCING PROJECTS

A public/private partnership success has been claimed for financing the $694 million E-470 in Colorado. The combined efforts of the E-470 Public Highway Authority and Morrison Knudsen enabled the entire sum to be secured through a combination of VRF bonds, senior current coupons, deferred interest, government loans and contractor investment. The segments of the road under this agreement will be opened gradually between mid-1998 and mid 1999 (TollTrans, Oct/Nov 1996).

A 1990s incentive to change the funding source for the road from traditional fuel tax and public finance to toll collections has helped Dallas construct the George Bush Turnpike. A TXDOT loan to the Texas Turnpike Authority, partial conversion of advance construction (to tap Federal-aid funds) and local right-of-way contributions have made the $463 million required for the project (TollTrans, Oct/Nov 1996).

In Irvine, California, a three-pronged approach was instituted to financing the ITS infrastructure development and operating and maintenance requirements. They have established a mutually beneficial relationship with their developers whereby they can choose to pay a $70,000 per intersection fee for a 5 percent capacity credit. They can also construct their adopted standards for communication infrastructure (fiber optics) as they build projects throughout the city. The ATMS fee is not a requirement, rather an option that developers may exercise in lieu of traditional mitigation measures. They have also being very successful in securing outside funding grants because of their long standing philosophy of investing in shelf-ready projects. They have a significant capital grants program as well as participation in important research projects (Arya Rohani, August/September 1996)

The Dallas-Forth Worth Texas Region have used CMAQ, STP, and NHS funding for advanced transportation management capital improvements. In addition, they have obtained other funding to support current operational investments from maintenance funds while future retrofit and upgrading investments are funded by Rehabilitation 10B funds. Local governments can also receive a majority of funding from different sources depending on their geographical location. Such categories include city bond funds, operating funds from their cities budget, county funds, state funds, turnpike authority funds, and transit Local Assistance Program/Congestion Management System funds (Dana Rocha and Chris Klaus, October/November 1996)

State Infrastructure Bank (SIB)

More states have been invited to participate in the State Infrastructure Bank (SIB) pilot program. An SIB serves as an umbrella under which a variety of innovative finance techniques can be implemented. The SIB could offer a range of loans and credit options, such as low-interest loans, loan guarantees, or loan requiring repayment of interest-only in early years and delayed repayments of the loan's principal. Through a revolving fund, states could lend money to public or private sponsors of transportation projects. Project-based or general revenues (such as tolls or dedicated taxes) could be used to repay loans with interest, and the repayments could replenish the fund so that new loans could be supported. Also, states could use federal capital as a reserve or a collateral against which to borrow

additional funds, usually by issuing bonds. Arizona, Florida, Ohio, Oklahoma, Oregon, South Carolina, Texas, Virginia, California and Missouri were selected to participate in the pilot program, initially, and more states will be have recently been invited to participate. Presently, participating states estimate that SIBs will fund between 10 and 50 percent of transportation projects (The Urban transportation Monitor, November 22, 1996).

State of Maryland

Maryland is engaged in a shared resource project to install 75 miles of fiber optics in its right-of-way. The agreement involves MCI and Teleport Communications Group (TCG). Operation began on September 4, 1995 on a portion of the project (College Park to downtown Baltimore segment). Maryland is allowing MCI access to 75 miles of right-of-way for 40 years (with options for renewal), in which MCI may lay as many conduits as feasible and desired and pull fiber as needed afterward. In return, MCI is giving Maryland 24 "dark fibers" for state use and acting as the lead contractor in building the system and providing routine maintenance. MCI has installed two conduits in the Baltimore-Washington Corridor segment of I-95, one for itself and one for Maryland, with no excess capacity. TCG, which entered the arrangement as a subcontractor to MCI, will pay MCI to install and maintain fiber for TCG's use in the privately held conduits. In return for access, TCG is providing the state with equipment necessary to light the original 24 dark fibers plus an additional 24 unlit fibers for public sector use. Each of the three partners retains ownership of the fiber dedicated to its use. As the party responsible for construction and maintenance, however, only MCI will physically access the system.

Maryland set up this shared resource project strictly as a procurement, purchasing telecommunications capacity with right-of-way access. The state also disaggregated its fiber-optics backbone geographically. Bidders could invest only in right-of-way routes of specific interest to them. The right-of-way for this agreement is part of the I-95 corridor that runs between Washington, D.C., and New York City, an area in which telecommunications redundancy can be valuable. Railroad and other utility rights-of-way are competitive options in the corridor.

The telecommunications capacity gained by the public sector as part of this shared resource arrangement will be used for a broad array of public agency needs; that is, it is not restricted to transportation needs. Coordination of public agency communications needs, under the auspices of the Department of General Services (DGS), preceded this shared resource project. The DGS began coordinating and purchasing telecommunications state-wide in the mid-1980s, when each agency was found to be contracting separately for inter-LATA services. At the time that the shared resource approach was introduced, self-supply through a statewide network was already under consideration.

The Request For Proposals (RFP) published by the DGS listed a number of technical requirements in exchange for private sector access to the right-of-way, including fiber, manhole access, and equipment. The bid received was less than fully compliant with these requests. For example, the state had requested equipment to light the fiber and local communications switching connections as well as free maintenance; the bidder offered dark fiber and maintenance. The DGS, however, has the ability to negotiate post-bid revisions and was able to conclude a more favorable arrangement with MCI. TCG did not respond to the initial RFP but was incorporated later in the arrangement.

Although the rights granted to MCI and TCG are technically not exclusive, the private partners have "practical exclusivity" because the state does not want repeated construction projects in the right-of-way. Maryland will probably allow only one company to put in fiber and oversee maintenance. Additional partners would have been accepted if they had responded to the RFP with an acceptable bid. This limited window of opportunity was defined by Maryland for both practical and safety reasons. The state does not want to create problems with traffic congestion and accidents from additional construction.

The shared resource arrangement provides for relocation cost sharing. That is, the state will pay for the necessary duct for the fiber-optics cables if and when relocation of the duct is required by construction or reconstruction of the roadway. MCI will relocate and provide ancillary equipment to reestablish the network connectivity to operate at "pre-move" performance levels. Potential contractors had requested that the state commit not to require relocation for at least five years from the contract date. Although the state did not expect to move facilities within that term, it would not commit contractually to refrain from doing so. It is unclear if MCI will be responsible for relocation if the state installs an ITS application.

The state's liability is limited to repair of any facilities that it damages; it is not liable for consequential damages. MCI has indemnified the state for any dissemination of information pertaining to the contract and for any negligent performance of its services under the contract. According to the interviewees, this was a significant issue in the negotiation of the contract. Because MCI is a major long-distance contractor, potential liability costs for "consequential" damages could run into millions of dollars.

Ohio Turnpike Commission

During the 1980s the Ohio Turnpike Commission entered into a number of licensing agreements for installation of telecommunications facilities in the Turnpike right-of-way, the most recent in the late 1980s. These agreements use a standard license form and are expressly non-exclusive; licenses extend for a 25-year period. Most of the current applications are for cellular uses; of the four or five licensing agreements for fiber optics, two covered the entire length of the Turnpike. Litel has 200 miles of fiber and MCI less than 75 miles of fiber along the Turnpike; other firms have also been granted licenses.

Of the five cases studied, only the Ohio Turnpike Commission receives a fixed per-mile fee for the use of its right-of-way. In return for allowing access, the Commission receives a license fee of $1,600 per mile of installed fiber, as well as rights to use the fiber optics for Turnpike purposes at low or no cost. At present, the Commission uses relatively little of the capacity available. Valuation of the right-of-way was determined with information from market studies conducted prior to the 1980s.

The Ohio Turnpike agreement requires relocation, alteration, or protection of the telecommunications facility, at the licensees' sole expense, in order to avoid interference with the operation, reconstruction, improvement, or widening of the Turnpike. From a strictly legal drafting perspective, the agreement contains excellent, broadly drafted indemnities. The licensees are required to maintain specified levels of insurance and to hold the Turnpike Commission harmless from losses, costs, claims, damages, and expenses arising out of or related to any claims as a result of the agreement. The Commission

has the right to defense by its own counsel and to control any claims made against it. The agreement also requires licensees to indemnify the Commission for bodily injury and property damage, to the extent of the licensees' negligence. The Commission is only liable to the extent that damage to its system is caused by its own "gross" negligence.

State of Missouri

In 1994, Missouri entered into a contract with Digital Teleport, Inc. (DTI) for the installation of a statewide backbone system of more than 1,300 miles of fiber optics. More than 300 miles have been installed and activated, and an additional 100 miles of conduit have been installed. The principal areas already constructed are within the City of St. Louis and between St. Louis, Columbia, and Jefferson City. In return for allowing access to the right-of-way, Missouri receives six lighted fibers for state highway use as well as DTI maintenance of the system.

Missouri's arrangement offers two strong advantages. It gives exclusivity to one telecommunications firm, although that firm can lease access to other telecommunications firms on its lines, and is doing so. And there is limited or no serious competition from alternative right-of-way locations, such as railroads, in the areas of greatest interest to the bidders; i.e., within the St. Louis Standard Metropolitan Area (SMA).

Missouri law allows utilities to exist in highway rights-of-way so long as they do not interfere with the roadway; however, the state has historically restricted utility access on the freeways to outer roadways or limited utility corridors, where access is contingent on meeting state permit requirements. Missouri's agreement with DTI grants an exclusive easement for 40 years within highway air space outside the standard utility corridor. The DTI facility was defined by the state as a "state highway facility," so it is permitted under the contract to be located in places other utilities are not located. "Exclusive" in this context applies only to other fiber-optics cable systems or communications systems.

Missouri, like Maryland, set up its shared resource project strictly as a procurement, purchasing telecommunications capacity with right-of-way access. DTI's exclusive access is considered a procurement contract awarded to a single contractor in a competitive process, rather than a special privilege, which might be subject to legal challenge. Missouri's RFP specified requirements for a basic statewide fiber-optics system, with the winner to be that bidder offering the most attractive package for transportation telecommunications infrastructure and service over and above the minimum requirements. Compensation was specified as access to highway right-of-way for the winner's own telecommunications system in the same corridors as the state system.

Although DTI can also locate within the standard utility corridor, the exclusivity provision does not apply to that portion of the right-of-way. The provision permits other firm's fiber-optics cables to cross DTI's easement at an approximate right angle, but only upon mutual agreement of the Missouri Highway and Transportation Commission (MHTC) and DTI regarding the location. Nothing in the agreement limits the Commission's authority to install its own fiber-optics cable for highway purposes within MHTC air space.

The state is to bear the cost of relocating. MHTC may either acquire additional right-of-way for the fiber-optics cable corridor in some fashion acceptable to DTI or remove and relocate other utilities at its own expense, so that DTI may place its system in the utility corridor if necessary.

DTI assumes responsibility for all warranties and liabilities for service and performance, and maintains insurance for bodily injury and property damage, product, and completed operation (with underground property damage endorsement, commercial automobile insurance, and worker's compensation insurance). Holders of sub-easements from DTI must maintain the same level of insurance.

MHTC is not responsible for any liability incurred by DTI. DTI is responsible for all injury or damage for its negligent acts or omissions and "saves harmless" MHTC for any expense or liability deriving from such acts or omissions, whether on its part or on the part of its subcontractors or agents. MHTC is liable for actual repair costs if its personnel, contractors, or subcontractors damage or destroy any part of the fiber system or equipment installed by DTI, but it is not liable for lost revenues or other incidental or consequential damages sustained by DTI.

Bay Area Rapid Transit

In this three-party agreement concluded in 1995, San Francisco Bay Area Rapid Transit (BART) procured a new fiber-optics system for use in operating its rail transit facilities. In addition to installing approximately $45 million worth of capital improvements procured by BART for its own system, MFS Network Technologies (MFS) will invest $3 million to install additional conduit throughout the BART system. MFS will then rent that conduit space to any carrier that wishes to pull its own fiber. BART will receive 91 percent of the rental returns, and MFS will receive the remaining 9 percent. BART anticipates that these revenues will cover all but $2 million of the cost—including operations, maintenance, and interest on debt—for its train control and communication system over the 15-year period; they may cover even more.

BART had investigated developing its own fiber system but determined that ownership of fiber or conduit might trigger its regulation as a public utility, which it preferred to avoid. This prompted BART to search for a joint development partner. BART's right-of-way gains value from the fact that it is a closed system and generally well protected from intrusion. Railroads are the main competition for right-of-way lessees; Southern Pacific, for example, owns substantial right-of-way leased to telecommunications carriers.

A particularly valuable portion of BART right-of-way runs through the BART tunnel under the San Francisco Bay. Although there are two other ways for telecommunications firms to cross the Bay, they pose greater risk: running cable across the Bay floor runs the risk of disruption from shipping or natural events, and capacity for stringing fiber along the Bay Bridge is limited due to weight considerations.

The BART agreement also involves the California DOT (Caltrans) as a "silent" partner. Of the 100 miles of right-of-way included in BART's current and planned extensions, 25 miles are actually owned by Caltrans, which conceded control but not ownership to BART. Thus, Caltrans is also a lessor and, for the airspace lease it negotiated with BART, will receive a portion of the revenues generated from MFS conduit leases after BART has fully paid for its telecommunications system. BART divides its revenues by facility segment and will pay Caltrans 25 percent of the revenues it receives from conduit leases on those segments of right-of-way shared with Caltrans (which are considered relatively lower value for telecommunications use). This cash compensation goes into the state highway account to be used for highway improvements throughout the state as allocated by the California Transportation

Commission; this format has already been established by Caltrans, which raises about $12 million per year from other airspace leasing.

Caltrans also receives in-kind compensation—four of BART's 48 strands of fiber-optics along the full 100 miles of the BART system, with access at 15 strategic locations. In fact, this in-kind compensation was the dominant attraction for Caltrans. Caltrans has estimated that this in-kind benefit is equivalent to $8-12 million in avoided costs for independent construction of Caltrans infrastructure or $960,000 per year in lease costs for comparable fiber.

Caltrans' lease of air space to BART appears to be exclusive for the conduit system. BART's license to MFS does not provide exclusivity; however, as long as the conduit system between two adjacent BART stations has unoccupied capacity and MFS is not in default under the agreement, BART has agreed that it will not grant any other provider a license to install a communications system between such points. After system capacity has been reached this exception will cease, even if space later becomes vacant; however, BART must give MFS right of first refusal if BART wants to add conduit capacity.

BART is obligated to designate a new route for the conduit if it must be relocated, and all relocation costs not paid for by a third party are to be paid by BART. MFS indemnifies BART for everything resulting from MFS's performance under the Agreement, regardless of the negligence of BART or whether liability without fault is sought to be imposed on BART, except where the damage results from negligent or willful misconduct by a "BART Indemnitee" and was not contributed to by any omission of MFS. MFS is not obligated to indemnify BART for BART's own negligence or willful misconduct.

Both BART and MFS waived consequential, incidental, speculative, and indirect damages, lost profits, and the like. The agreement includes the form of license to be used by MFS in marketing excess capacity to third-party customers, the "User Agreement." Interestingly, it requires the user to insure MFS, exculpate MFS from liability for service interruptions, and indemnify MFS.

City of Leesburg, Florida

The City of Leesburg's Communications Utility and its private partners, Knight Enterprises and Alternative Communications Networks (ACN), developed a new fiber-optics system within the City. Leesburg is providing funding for construction and right-of-way access on above-ground utility poles; ACN is designing and constructing the network and leasing the capacity to private or public customers under a five-year contract with the City.

The City owns only the dark fiber on its right-of-way, which it can also use for communications among its own buildings. Customers own the fiber from the right-of-way line to their own facilities, pay ACN a fee for access to the City-owned backbone, and can either use their own equipment or pay ACN for use of ACN equipment to light the fiber. Approximately 10 miles of fiber have been installed, and plans are under way for an additional 30 miles of fiber.

Leesburg is investing its own capital in the project and will receive cash compensation based on lease payments (i.e., revenue sharing) in addition to fiber-optics capacity. The initial cash revenues will be used to repay capital and, thereafter, revenues will be split evenly between the City and its telecommunications partner. Funds will be deposited into a separate utility fund for communications to pay

maintenance and miscellaneous costs. At the end of the year, any funds remaining in the account will be transferred to the general account. Leesburg will also use revenues from its telecommunications system to obtain fiber-optics interconnections for government services. The City's agreement with ACN requires that if other entities express interest in the City's cables, ACN must coordinate the connection and the equipment used for those connections. ACN can bill those other entities for time and materials spent in the evaluation. Further, since the City is sharing revenues from ACN's marketing of the network, it prohibited ACN from competing with the City's cables.

Essentially, there are two levels of private sector exclusivity in the Leesburg arrangement: (1) the number of private sector partners involved in the shared resource agreement, and (2) the number of telecommunications service providers gaining access to the fiber-optics infrastructure. ACN is the exclusive marketing partner for City-owned cable built under the ACN-Leesburg arrangement. The City can allow additional vendors to operate within the service area under other agreements, and the "Leesburg Telecommunications Systems Permit Ordinance" appears to contemplate open access to multiple vendors. Exclusive access to the City-owned telecommunications capacity is not granted to telecommunications service providers. The Leesburg-ACN agreement also has a unique reverse-exclusivity provision. Within the service area, ACN may not offer certain services on cables other than those provided by the City without permission from the City. Relocation is not explicitly addressed in the agreement, probably because of the short (five-year) duration of the contract.

SOURCES:

- *Full Speed ITS in Irvine, August/September 1996,* by Arya Rohani, Traffic Technology International.
- *Planning for the People: The MPO's Role in ITS for the Dallas-Fort Worth Texas Region,* October/November 1996, by Dana Rocha and Chris Klaus, Traffic Technology International.

Return to Table of Contents